

Ohio Agricultural Experiment Station

TECHNICAL SERIES, BULLETIN No. 9

ENVIRONMENTAL FACTORS IN RELATION TO PLANT DISEASE AND INJURY: A BIBLIOGRAPHY

J. D. WILSON



WOOSTER, OHIO, U. S. A., JULY, 1932

One Dollar per Copy

CONTENTS

Introduction	3
Literature Citations	6
Environmental Factor Index	154
Host-Disease-Injury Index	173
Host Index (Scientific Names)	200

This page intentionally blank.

ENVIRONMENTAL FACTORS IN RELATION TO PLANT DISEASE AND INJURY: A BIBLIOGRAPHY

J. D. WILSON

INTRODUCTION

This bibliography is an assembly of some of the papers in botanical literature which make reference to the influence of those environmental factors which are, in particular instances, either directly or indirectly harmful to plants. These factors may act directly on the plant, as in the freezing, desiccation, scalding, or poisoning of its tissue, or they may affect a host indirectly by exerting an influence on some host-parasite relation. In other instances, the factor involved may act only on a pathogen without reference to a host. The environmental factors considered are listed in the index to the second section of this paper, and the scope of the diseases, injuries, and abnormalities dealt with is indicated in the third section.

Many of the somewhat secondary possibilities of this sort of bibliography have been neglected; others have been considered in some detail. The incompleteness of the whole is appreciated by the author, but the addition of further citations in any number would involve a disproportionate effort. The papers listed have not been appraised in any way but have been included simply on the basis of some reference to the subject here considered. No reference has been made to the copies of the Plant Disease Reporter.

The author index is arranged alphabetically by senior authorship. In those instances where a given author is referred to more than once the arrangement is chronological. When an author is listed two or more times for one year, bulletins and annual reports are given precedence over paged articles in periodicals, and the latter are arranged according to the size of the page numbers. Joint authorship is given a secondary position, and such citations are arranged alphabetically as well as chronologically. Each citation is given a number and is referred to in the environmental and host-disease-injury indexes by this number. In cases where authorship is indefinite, as in many of the Annual Reports from Experiment Stations, the items are indexed under the term "anonymous"

and there arranged chronologically according to the geographical location concerned. Plate and figure numbers have been omitted from citations for the sake of brevity; likewise, names of publishers for books. Also, the authorities for botanical names have been omitted from the indexes, and these names have not been put in italics where they occur in titles.

The two cross indexes provided serve, first, to group the items given in the author list according to subject and, second, to provide a form of annotation of the individual articles. In these indexes, as indicated above, only the number referring to a given citation in the author list is given. The index to the second section lists the environmental factors considered. These were listed and the items assembled under each heading after the papers appearing in the author list had been abstracted. In this way divisions and subdivisions, as they were necessary, were provided for the factors to be considered. If an article refers only to the influence of one environmental factor on a single disease of a single host, as, for instance, the cardinal temperatures for the infection of cabbage by *Fusarium conglutinans*, a consideration of both cross indexes would provide a brief abstract of that article. However, if an article treats a subject in a general way, having a title somewhat as follows, "The influence of the environment on plant disease", this annotating function is of little use.

Items listed as "general" under the various headings are similar to the one last mentioned above, in which the reference to the factor considered is so general that they cannot be more specifically placed. This is true of the division "Environment". "Climate, regional" refers chiefly to the geographical delimitations of disease incidence. The division "Weather" includes many references of a very general nature, but some of these are listed under more specific sub-divisions. Moisture and temperature of air and soil exert a multitudinous array of effects on plant disease, many of which are definitely mentioned by authors and are so indexed. Also, these factors have been extensively studied by many investigators in their influences on fungi without reference to a host plant. "Host characteristics" assume importance in the host-disease relation. "Nutritional" factors may be either direct or indirect in their effect on disease. Both excesses and deficiencies of a number of elements and compounds are listed. The divisions "Time Factor", "Toxins", and "Chemotropic Responses" were included to provide a place for the listing of the articles making reference to these subjects, which could not be otherwise indexed, and the lists as given do not afford

a complete assembly of the literature available on these three subjects. The headings of the remaining divisions are self-explanatory.

In the host-disease-injury index the common names of the hosts are arranged alphabetically, and, under each of these hosts, their respective diseases and types of injury are grouped in the same manner. Names of pathogenic forms or any general terms are inserted in alphabetical order in the list of host names with equal ranking. In an additional list the scientific names of the hosts included in the above index are arranged alphabetically for the convenience of those not acquainted with the common names. Bulletin 1366, 1926, of the U. S. Department of Agriculture, entitled "A check list of diseases of economic plants in the United States", has been used as the authority on nomenclature whenever possible. Exceptions to this are those instances in which the name, either of host or disease, is not included in the bulletin or could not, with the information at hand, be identified with any one that is included. In some instances related items are grouped under common headings only for convenience in indexing. The abbreviation "sp." as used in this bibliography after a generic name indicates indefiniteness as concerns the specific name. The form "spp." is used in much the same manner but indicates that a number of specific names are included under the genus concerned. Of these forms, any or all may be definitely or indefinitely known but not separately listed.

The author wishes to acknowledge his indebtedness to those members of the library staffs of the Ohio Agricultural Experiment Station, the U. S. Department of Agriculture, and the Ohio State University who so kindly gave their time in assisting in the identification and correction of many of the citations appearing in this bibliography.

LITERATURE CITATIONS

- Abbe, C. 1895. (1)
The influence of cold on plants, a résumé. *Exp. Sta. Rec.* 6: 777-781.
- Abbot, E. V. 1929. (2)
Diseases of economic plants in Peru. *Phytopath.* 19: 645-656.
- Abbot, J. B., S. D. Conner, and H. R. Smalley. 1913. (3)
The reclamation of an unproductive soil of the Kankakee marsh region. Soil acidity, nitrification and the toxicity of soluble salts of aluminum. *Ind. Agr. Exp. Sta. Bull.* 170, 329-374.
- Abe, T. 1927. (4)
Experimentelle Studien über die Pilzscha den von Reissämlingen. IV. (Japanese) *Jour. Plant Protection* 14: 12 pp.
- _____. 1928. (5)
Studies on a new disease of *Celosia cristata* caused by *Fusarium celosiae* n. sp. *Mem. Coll. Agr. Kyoto Imp. Univ.* 7: 51-64.
- _____. 1930. (6)
On the influence of copper sulphate to the growth of *Piricularia oryzae*, with special reference to the temperature as an environmental factor. *Ann. Phytopath. Soc. Japan* 2: 171-196.
- Abell, T. H. 1927. (7)
Some observations on winter injury in Utah peach orchards. *Utah Agr. Exp. Sta. Bull.* 202, 1-28.
- Aberson, J. H. 1917. (8)
Bijdrage tot de kennis der zoogenaamde physiologisch zure en alkalische zouten en hun beteekenis voor de verklaring der "bodemziekten". *Cultura* 29: 21-43.
- Adam, D. B. 1923. (9)
Experiments on the storage of fruits. *Jour. Dept. Agr. Victoria* 21: 178-186, 234-241, 371-382.
- _____. and J. E. Harrison. 1925. (10)
Experiments in cool storage of apples. *Jour. Dept. Agr. Victoria* 23: 226-234.
- Adams, J. F. 1918. (11)
An Actinomycete, the cause of soil rot or pox in sweet potatoes. *Phytopath.* 18: 152. (Abst.).
- _____. 1925. (12)
The spore discharge of the apple scab fungus in Delaware. *Del. Agr. Exp. Sta. Bull.* 140, 1-16.
- _____. 1925. (13)
Plant diseases and their control in relation to climatic conditions in Delaware. *Trans. Penin. Hort. Soc.* 39: 39-43.
- _____. 1926. (14)
Plant disease survey of economic crops. *Del. State Bd. Agr. Bull.* 15 (1), 1-28.
- _____. 1926. (15)
Terminal shoot and bud injury on peaches associated with low temperatures during the spring of 1925. *Del. State Bd. Agr. Bull.* 15 (3), 44-46.
- _____. 1927. (16)
Studies on pox of sweet potato. *Del. Agr. Exp. Sta. Bull.* 152, 41-47.
- _____. 1928. (17)
An Actinomycete, the cause of soil rot or pox in sweet potatoes. *Phytopath.* 18: 152. (Abst.).
- _____. 1929. (18)
An Actinomycete, the cause of soil rot or pox in sweet potatoes. *Phytopath.* 19: 179-190.
- Addoms, R. M. 1923. (19)
The effect of the hydrogen ion on the protoplasm of the root hairs of wheat. *Amer. Jour. Bot.* 10: 211-220.
- Aderhold, R. 1898. (20)
Über die in den letzten Jahren in Schlesien besonders hervorgetretenen Schäden und Krankheiten unserer Obstbäume und ihre Beziehungen zum Wetter. *Zeitschr. Pflanzenkr.* 8: 305-306. (Abst.).
- _____. 1900. (21)
Die Fusicladium unserer Obstbäume. *Landw. Jahrb.* 29: 541-588.

- _____. 1902. (22)
Über *Clasterosporium carpophilum* (Lév.) Aderh. und Beziehungen desselben zum Gummiflusse der Steinobstes. Arb. K. Biol. Abt. Land- u. Forstw. 2: 515-559.
- _____. 1902. (23)
Ein Beitrag zur Frage der Empfänglichkeit der Apfelsorten für *Fusicladium dendriticum* (Wallr.) Fuck. und deren Beziehungen zum Wetter. Arb. K. Biol. Abt. Land- u. Forstw. 2: 560-566.
- _____. 1907. (24)
Versuche über den Einfluss häufigen Regens auf die Neigung zur Erkrankung von Kulturpflanzen. Arb. Biol. Reichsanst. Land- u. Forstw. 5: 354-360.
- _____. and W. Ruhland. 1906. (25)
Zur Frage der Überwinterung und Verbreiterung der Getreideroste. Mitt. K. Biol. Anst. Land- u. Forstw. 2: 3-5.
- Agulhon, H. 1910. (26)
Recherches sur la présence et le rôle du bore chez les végétaux. Thèse (Paris), 163 pp.
- Ajrekar, S. L. 1924. (27)
The problem of potato storage in western India. Agr. Jour. India 19: 35-44.
- _____. and J. D. Ranadive. 1923. (28)
The relative responsibility of physical heat and microorganisms for the hot weather rotting of potatoes in western India. Agr. Res. Inst., Pusa, Bull. 148, 1-18.
- Åkerman, Å. 1927. (29)
Några erfarenheter om rotdödarens härjningar på de Skånska Vetefälten. Landtmannen 10: 739.
- Albert, R. 1929. (30)
Die sogenannten Bodenerkrankungen, ihr Wesen, ihre Ursachen und Bedeutung für die Forstwirtschaft. Centralbl. Ges. Forstwes. 55: 277-279.
- Alberts, H. W. 1927. (31)
Effect of pericarp injury on moisture absorption, fungus attack, and vitality of corn. Jour. Amer. Soc. Agron. 19: 1021-1030.
- Alcock, E. S. 1926. (32)
"No growth", or bare patches in cereals. Jour. Dept. Agr. So. Aust. 30: 124-125.
- Alexander, W. H. 1921. (33)
Frost and fruit in southern Ohio in 1917. U. S. Dept. Agr., Mo. Weather Rev. 49: 232-234.
- _____. 1927. (34)
Ohio weather and the sugar beet. Amer. Met. Soc. Bull. 8 (3), 50. (Abst.).
- Allard, H. A. 1916. (35)
Some properties of the virus of the mosaic disease of tobacco. Jour. Agr. Res. 6: 649-674.
- Allen, R. W. 1915. (36)
Condition of root system of apple trees in the Hood River district. Ore. Agr. Exp. Sta. Rept. (Hood River Br. Sta.) 1914-15, 20-24.
- Allyn, W. P. 1928. (37)
The relation of lime to the absorption of iron by plants. Proc. Ind. Acad. Sci. 37: 405-409.
- Alten, H. and W. Jännicke. 1931. (38)
Eine Schädigung von Rosenblättern durch Asphaltdämpfe. Bot. Zeit. 49: 195-199.
- _____. and _____. 1932. (39)
Nachtrag zu unserer Mitteilung über "eine Schädigung von Rosenblättern durch Asphaltdämpfe". Zeitschr. Pflanzenkr. 2: 33. (Abst.).
- Ames, A. 1915. (40)
The temperature relations of some fungi causing storage rots. Phytopath. 5: 11-19.
- Amos, A. 1907. (41)
Effect of fungicides upon the assimilation of carbon dioxide by green leaves. Jour. Agr. Sci. 2: 257-266.
- _____. 1918. (42)
The difficulties of growing red clover—clover sickness and other causes of failure. Jour. Roy. Agr. Soc. England 79: 68-88.
- Ampola, G. and G. Tommasi. 1911. (43)
Composti di arsenico impiegati e pericoli che possono provenire dal loro uso. Ann. R. Staz. Chim. Agr. Sper., Roma, 5: 263-276.
- _____. and A. Vivenza. 1916. (44)
Danni cagionati alla vegetazione in un terreno prossimo agli Stabilimenti della Società Alti, Forni, Fonderie ed Acciaierie di Terni. Ann. R. Staz. Chim. Agr. Sper., Roma, Ser. 8, 2: 139-164.

- Anderson, A. K. 1925. (45)
 Biochemistry of plant diseases. Biochemistry of *Fusarium lini* Bolley. Minn. Studies in Plant Sci. (Biol.) 5: 237-280.
- Anderson, H. C. L. 1890. (46)
 Rust in wheat. Experiments and their objects. Agr. Gaz. N. S. Wales 1: 81-92.
- Anderson, H. W. 1920. (47)
 Diseases of Illinois fruits. Ill. Agr. Exp. Sta. Circ. 241, 1-155.
- _____. 1920. (48)
 Some factors influencing the practical control of blister canker in apple orchards. Proc. Amer. Soc. Hort. Sci. 17: 111-116.
- _____. 1925. (49)
 Experiments with fertilizers and cultivation for the control of bacterial spot of peach. Trans. Ill. Hort. Soc. 59: 258-266.
- Anderson, M. L. 1921. (50)
 Soil condition affecting the prevalence of *Fomes annosus* (*Trametes radiciperda*). Trans. Roy. Scot. Arbor. Soc. 35: 112-117.
- _____. 1930. (51)
 A case of "damping-off" induced by the use of wood-ashes as a manure on seed-beds. Scottish Forestry Jour. 44: 7-16.
- Anderson, P. J. 1912. (52)
 Cement dust injury to fruit trees. Phytopath. 2: 45. (Abst.).
- _____. 1914. (53)
 The effect of dust from cement mills on the setting of fruit. Plant World 17: 57-68.
- _____. 1923. (54)
 The relation of soil moisture to formaldehyde injury of onion seedlings. Phytopath. 13: 392-403.
- _____. 1924. (55)
 Botrytis cinerea in Alaska. Phytopath. 14: 152-155.
- _____. 1928. (56)
 Soil reaction and black root rot of tobacco. Phytopath. 18: 131. (Abst.).
- _____. 1929. (57)
 Soil reaction studies on the Connecticut tobacco crop. Jour. Amer. Soc. Agron. 21: 156-158.
- _____. and G. H. Chapman. 1923. (58)
 Tobacco wildfire in 1922. Mass. Agr. Exp. Sta. Bull. 213, 1-27.
- _____. A. V. Osmun, and W. L. Doran. 1926. (59)
 Soil reaction and black root-rot of tobacco. Mass. Agr. Exp. Sta. Bull. 229, 117-136.
- _____. and W. H. Rankin. 1914. (60)
 Endothia canker of chestnut. N. Y. (Cornell) Agr. Exp. Sta. Bull. 347, 527-618.
- Angell, H. R. 1929. (61)
 Purple blotch of onion (*Macrosporium porri* Ell.). Jour. Agr. Res. 38: 467-487.
- Annand, P. N. 1927. (62)
 Tumors in kale. Science 65: 553-554.
- Anonymous. 1920. (63)
 Deciduous fruits investigations. Calif. Agr. Exp. Sta. Ann. Rept. 39-45.
- _____. 1921. (64)
 Plant pathology. Idaho Agr. Exp. Sta. Ann. Rept., Bull. 122, 41-44.
- _____. 1923. (66)
 Pomology. Calif. Agr. Exp. Sta. Ann. Rept., 188-218.
- _____. 1923. (67)
 Plant pathology. Idaho Agr. Exp. Sta. Ann. Rept., Bull. 131, 49-53.
- _____. 1925. (68)
 The weather and plant diseases. Gardeners' Chron. 78: 261.
- _____. 1927. (69)
 Chlorosis of trees and shrubs. Idaho Agr. Exp. Sta. Ann. Rept., Bull. 149, 14.
- _____. 1927. (70)
 Biology. N. Mex. Agr. Exp. Sta. Ann. Rept. 38, 19-23.
- _____. 1928. (71)
 Control of the anthracnose of grape. Dept. Agr. Bombay Leaflet 1, 1-3.
- _____. 1928. (72)
 Krankheiten und Beschädigungen der Kulturpflanzen im Jahre 1927. Mitt. Biol. Reichsanst. f. Land- u. Forstw. 37: 212.
- _____. 1928. (73)
 Plant disease studies. Tenn. Agr. Exp. Sta. Ann. Rept. 41, 27.

- _____. 1929. (74)
Control measures for citrus scab. Agr. Gaz. N. S. Wales 40: 714.
- _____. 1929. (75)
Corn disease studies. Iowa Agr. Exp. Sta. Ann. Rept. 1928-29, 60-61.
- _____. 1929. (76)
Department of Botany. Biennial Report for the fiscal years ending Nov. 30, 1927 and 1928. Mass. Agr. Exp. Sta. Bull. 247, 306-313.
- _____. 1929. (77)
Plantesygdomme i Danmark 1928. Oversigt, samlet ved Statens plantepatologiske Forsog. Tidsskr. f. Planteavl. 35: 420-471.
- _____. 1930. (78)
Tobacco diseases. Ky. Agr. Exp. Sta. Ann. Rept. 1929, 15-18.
- Antonoff, S. M. 1926. (79)
Susceptibility of spring wheat to bunt in relation to the date of sowing (Russian). Sci. Trans. Siberian Agr. Acad. 5: 1-14.
- Appel, O. 1912. (80)
Beitrage zur Kenntnis der Kartoffelpflanze und ihrer Krankheiten III. Arb. K. Biol. Anst. Land- u. Forstw. 8: 449-492.
- _____. 1915. (81)
Disease resistance in plants. Science 41: 773-782.
- _____. 1924. (82)
Fusarium als Erreger von Keimlingskrankheiten. Arb. Biol. Reichsanst. Land- u. Forstw. 13: 263-303.
- _____. 1929. (83)
Kohlkrankheiten II. Deutsche Landw. Presse 56: 546.
- _____. and G. Gassner. 1907. (84)
Untersuchungen über den Brand, insbesondere den Flugbrand des Getreides. Mitt. K. Biol. Anst. Land- u. Forstw., 9-12.
- _____. and E. Riehm. 1911. (85)
Die Bekämpfung des Flugbrandes von Weizen und Gerste. Arb. K. Biol. Anst. Land- u. Forstw. 8: 343-426.
- _____. and _____. 1912. (86)
Untersuchungen über die Brandkrankheiten des Getreides. Arb. K. Biol. Anst. Land- u. Forstw. 12: 9-14.
- Archibald, E. S. 1920. (87)
Report of the division of botany. Canada Exp. Farms Rept., 58-64.
- Arens, K. 1929. (88)
Untersuchungen über Keimung und Zytologie der Oosporen von *Plasmopara viticola* (Berl. et de Toni). Jahrb. Wiss. Bot. 70: 57-92.
- _____. 1929. (89)
Untersuchungen über *Pseudoperonospora humuli* (Miyabe u. Takah.), den Erreger der neuen Hopfenkrankheit. Phytopath. Zeitschr. 1: 169-193.
- Armstrong, S. F. 1922. (90)
The Mendelian inheritance of susceptibility and resistance to yellow rust (*Puccinia glumarum*, Erikss. et Henn.) in wheat. Jour. Agr. Sci. 12: 57-96.
- Arnaud, G. 1914. (91)
Les gélées et les altérations des feuilles d'arbres. Bull. Soc. Path. Végét. France 1: 21-25.
- _____. 1915. (92)
Effets de la grêle sur les arbres. Bull. Soc. Path. Végét. France 2: 121-122.
- _____. 1915. (93)
La jaunisse des betteraves en 1915. Bull. Soc. Path. Végét. France 2: 123-124.
- _____. 1915. (94)
Le mildiou des céréales (*Sclerospora macrospora*). Compt. Rend. Acad. Agr. France 1: 429-435.
- _____. 1919. (96)
Sur un mode de traitement de la chlorose. Rev. Vitic. 51: 325-330.
- _____. and F. Lafont. 1912. (97)
Accidents météorologiques et maladies du murier. Ann. École Nat. Agr., Montpellier, 11: 169-215.
- Arndt, C. H. 1922. (98)
The growth of field corn as affected by iron and aluminum salts. Amer. Jour. Bot. 9: 47-71.

- Arrhenius, O. 1921. (99)
A factor influencing the growth of tobacco wilt disease. Meded. Deli. Proefstn. (Ark. F. Bot. 18: 1-54, 1922.).
- _____. 1922. (100)
Bodenreaktion und Pflanzenleben. Leipzig.
- _____. 1923. (101)
Några bedrag till kannedomen om sambandet mellan markreaktionen och vissa kulturväxters utveckling. Orienterande försök. Centr. Försök. Jordbruksområdet Medd. 245: 1-13.
- _____. 1924. (102)
Försök till bekämpande av Betrotbrand. II. Kolkningens och markreaktionens inflytande på sjuka och friska betors utveckling. K. Landtbr. Akad. Handl. Tidskr. 63: 256-266.
- _____. 1926. (103)
Kalkfrage, Bodenreaktion, und Pflanzenwachstum. Leipzig.
- _____. 1930. (104)
Die Chlorfrage. Zeit. Pfl-ernähr. u. Düng. 16: 310.
- Arthur, J. C. 1901. (105)
The asparagus rust. Ind. Agr. Exp. Sta. Ann. Rept. 13, 10-14.
- _____. 1901. (106)
Damping off of beets in the field. Ind. Agr. Exp. Sta. Ann. Rept. 13, 15-16.
- _____. 1903. (107)
Problems in the study of plant rusts. Bull. Torrey Bot. Club 30: 1-18.
- _____. and W. Stuart. 1900. (108)
Corn smut. Ind. Agr. Exp. Sta. Ann. Rept. 12, 84-136.
- Ascroft, R. W. 1925. (109)
The conservation of the nation's vegetation; the effect of smoke on plant life. London.
- Askinazy, W. 1928. (110)
The "hot winds" of the plains of southeastern Europe. (Trans. title). Jour. Sci. Inst. Amerlior. 17: 69-114.
- Aso, K. 1902. (111)
On the influence of different ratios of lime and magnesia upon the development of plants. Bull. Col. Agr. Imp. Univ. (Tokyo) 4: 361-370.
- _____. 1903. (112)
On the physiological influence of manganese compounds on plants. Bull. Col. Agr. Imp. Univ. (Tokyo) 5: 177-185.
- Atanasoff, D. 1923. (113)
Fusarium blight of the cereal crops. Meded. Landb., Wageningen, 27: 1-132.
- _____. 1926. (114)
Sprain or internal brown spot of potatoes. Phytopath. 16: 711-722.
- Atkins, W. R. G. 1921. (115)
Relation of the hydrogen-ion concentration of the soil to plant distribution. Nature 108: 80-81.
- _____. 1922. (116)
Some factors affecting the hydrogen-ion concentration of the soil and its relation to plant distribution. Sci. Proc. Roy. Dublin Soc. 16: 369-413.
- _____. 1922. (117)
Note on the occurrence of the finger and toe disease of turnips in relation to the hydrogen-ion concentration of the soil. Sci. Proc. Roy. Dublin Soc. 16: 427-434.
- _____. 1930. (118)
The distribution of pasture plants in relation to soil acidity and other factors. Sci. Proc. Roy. Dublin Soc. 19: 533-547.
- Atkinson, G. F. 1891. (119)
Black "rust" of cotton. Ala. Agr. Exp. Sta. Bull. 27, 1-16.
- _____. 1892. (120)
Some leaf blights of cotton. Ala. Agr. Exp. Sta. Bull. 36, 1-32.
- _____. 1892. (121)
Some diseases of cotton. Ala. Agr. Exp. Sta. Bull. 41, 1-65.
- _____. 1893. (122)
Oedema of the tomato. N. Y. (Cornell) Agr. Exp. Sta. Bull. 53, 75-108.
- _____. 1893. (123)
Oedema of apple trees. N. Y. (Cornell) Agr. Exp. Sta. Bull. 61, 299-302.
- _____. 1895. (124)
Damping off. N. Y. (Cornell) Agr. Exp. Sta. Bull. 94, 231-272.

- _____. 1901. (125)
Studies of some shade tree and timber destroying fungi. N. Y. (Cornell) Agr. Exp. Sta. Bull. 193, 199-235.
- Atwood, W. M. 1922. (126)
Physiological studies of effects of formaldehyde on wheat. Bot. Gaz. 74: 233-263.
- Audin, M. 1900. (127)
La chlorose de la vigne dans le Beaujolais. Ann. Soc. Bot., Lyon, 25: 64-69.
- Averna-Saccà, R. 1910. (128)
L'acidità dei succhi della piante in rapporto alla resistenza contro gli attacchi dei parassiti. Ital. Stat. Sper. Agr. 43: 185-209.
- Ayoutantis, A. 1924. (129)
A note on the powdery scab of potato due to *Spongospora subterranea*. Rev. Path. Vég. et Ent. Agric. 11: 60-66.
- Ayyar, C. S. R. 1927. (130)
A bacterial soft rot of garden poppy. Mem. Dept. Agr. India, Bact. Ser. 2: 29-33.
- Azzi, G. 1927. (131)
La climat du blé dans le monde: les bases écologiques de la culture mondiale du blé. Impr. Inst. Intern. Agr., Rome.
- Babcock, D. C. 1916. (132)
Diseases of forest and shade trees. Ohio Agr. Exp. Sta. Mo. Bull. 1 (10): 291-296.
- Bachmann, J. 1895. (133)
Einfluss der äussern Bedingungen auf die Sporenbildung von *Thamnidium elegans* Link. Bot. Zeit. 53: 107-135.
- Backe, R. 1929. (134)
Frost und Pilze. Deutsche Forst-Zeitg. 44 (47): 1218-1219.
- Bahgat, M. 1928. (135)
The action of *Phomopsis californica* in producing a stem-end decay of citrus fruits. Hilgardia 3: 153-181.
- Bailey, D. L. 1923. (136)
Sunflower rust. Minn. Agr. Exp. Sta. Tech. Bull. 16, 1-31.
- _____. 1928. (137)
Report of the Dominion Rust Research Laboratory, Winnipeg, Man. Canada Dept. Agr., Div. Bot. Rept. 1927, 47-54.
- Bailey, F. D. 1913. (138)
Blossom-end rot of tomato. Ore. Agr. Exp. Sta., Crop Pest and Hort. Rept. 1911-12, 290.
- Bailey, L. H. 1896. (139)
Fruit brevities. N. Y. (Cornell) Agr. Exp. Sta. Bull. 117, 347-396.
- Bain, H. F. 1926. (140)
Cranberry disease investigations on the Pacific Coast. U. S. Dept. Agr., Dept. Bull. 1434, 1-27.
- Bain, S. M. 1895. (141)
Some experiments with fungicides on peach foliage. Tenn. Agr. Exp. Sta. Bull. 8 (3), 35-40.
- _____. 1901. (142)
The injury of fungicides to peach foliage. Science 14: 221-222.
- _____. 1902. (143)
The action of copper on leaves. Tenn. Agr. Exp. Sta. Bull. 15 (2), 17-108.
- Baker, F. S. 1929. (144)
Effect of excessively high temperatures on coniferous reproduction. Jour. Forestry 27: 949-975.
- Bakke, A. L. 1912. (145)
The late blight of barley (*Helminthosporium teres* Sacc.). Proc. Iowa Acad. Sci. 19: 93-102.
- _____. 1913. (146)
The effect of city smoke on vegetation. Iowa Agr. Exp. Sta. Bull. 145, 383-409.
- Ball, E. D. 1909. (147)
Is arsenical spraying killing our fruit trees? Jour. Econ. Ent. 2: 142-148.
- _____, E. G. Titus, and J. E. Greaves. 1910. (148)
The season's work on arsenical poisoning of fruit trees. Jour. Econ. Ent. 3: 187-197.
- Ballard, W. S. 1910. (149)
Our knowledge of chlorosis. Proc. Fruit Growers' Conv. Calif. 37: 71-76.
- _____, and W. H. Volck. 1914. (150)
Apple powdery mildew and its control in the Pajaro Valley. U. S. Dept. Agr., Dept. Bull. 120, 1-26.

- _____, J. R. Magness, and L. A. Hawkins. 1922. (151)
Internal browning of the Yellow Newton apple. U. S. Dept. Agr., Dept. Bull. 1104, 1-24.
- Balls, W. L. 1907. (152)
The physiology of a simple parasite. Khediv. Agr. Soc. Cairo Yrbk. 1906, 91-99.
- _____. 1908. (153)
Temperature and growth. Ann. Bot. 22: 557-591.
- _____. 1912. (154)
The cotton plant in Egypt. London.
- Balmer, J. A. 1897. (155)
A report on damage to fruit trees caused by the severe freeze of November, 1896. Wash. Agr. Exp. Sta. Bull. 30, 1-30.
- Bamberger, M. and J. Nubaum. 1928. (156)
Luftuntersuchungen zur Feststellung von Rauchschäden. Zeitschr. Angew. Chemie 41: 22-26.
- Bancroft, C. K. 1910. (157)
Researches on the life history of parasitic fungi. Ann. Bot. 24: 359-372.
- Barbut, G. 1894. (158)
Sur le traitement de la chlorose par le procédé Rassignier. Prog. Agr. et Vitic. 22: 462-465.
- Baribeau, B. and H. N. Raicot. 1928. (159)
Studies on diseases caused by Sclerotinia-producing fungi in Quebec. Canada Dept. Agr., Div. Bot., Rept. 1927, 220-222.
- Barker, B. T. P. and C. T. Gimingham. 1913. (160)
Wind scorch of apple foliage. Agr. and Hort. Res. Sta., Bristol Univ., Ann. Rept., 67-68.
- _____. et al. 1922. (161)
Leaf scorch on fruit trees. Agr. and Hort. Res. Sta., Bristol Univ., Ann. Rept. 1921, 77-121.
- Barnette, R. M. 1923. (162)
The influence of soluble aluminum salts on the growth of wheat seedlings in Shive's R₂C₁ solution. N. J. Agr. Exp. Sta. Ann. Rept. 44, 255-258.
- Barre, H. W. 1909. (163)
Cotton anthracnose investigation. S. C. Agr. Exp. Sta. Ann. Rept. 22, 89-118.
- _____. 1916. (164)
Report of the botanist and plant pathologist. S. C. Agr. Exp. Sta. Ann. Rept. 29, 16-20.
- Barrett, J. T. 1922. (165)
Notes on bacterial gummosis of stone fruits. Phytopath. 12: 103-104.
- _____. and H. S. Fawcett. 1922. (166)
Withertip, tear-stain and control of brown rot. Calif. Citrogr. 7: 232, 233, 254.
- Barrus, M. F. 1921. (167)
Bean anthracnose. N. Y. (Cornell) Agr. Exp. Sta. Mem. 42, 97-209.
- Barss, H. P. 1921. (168)
Physiological disorders of developing fruits. Ore. Agr. Exp. Sta., Crop Pest and Hort. Rept. 3, 159-166.
- _____. 1922. (169)
Take-all disease of cereals. Ore. Agr. Exp. Sta. Bien. Rept. 1920-22, 72-73.
- _____. 1922. (170)
Factors inducing calyx spray injury. Better Fruit 16 (6): 7, 24.
- Bartholomew, E. T. 1913. (171)
Black heart of potatoes. Phytopath. 3: 180-182.
- _____. 1915. (172)
A pathological and physiological study of the black heart of potato tubers. Centbl. Bakt. 43: 609-639.
- _____. 1922. (173)
Bearing of water relation to internal decline of lemons. Calif. Citrogr. 7: 126, 128-129.
- _____. 1923. (174)
Internal decline of lemons II. Amer. Jour. Bot. 10: 117-126.
- _____. 1923. (175)
Alternaria rot of lemons. Calif. Citrogr. 8: 262, 293-294.
- _____. 1925. (176)
Report on internal decline (Endoxerosis) of lemons. Calif. Citrogr. 10: 274, 294, 308.
- _____. J. T. Barrett, and H. S. Fawcett. 1923. (177)
Internal decline of lemons. I. Amer. Jour. Bot. 10: 67-70.
- Bartholomew, L. K. and E. S. Jones. 1923. (178)
Relation of certain soil factors to the infection of oats by loose smut. Jour. Agr. Res. 24: 569-575

- Bartlett, F. A. 1924. (179)
Smoke injury to trees. *Tree Talk* 5: 21.
- Barton, L. V. and S. F. Trelease. 1927. (180)
Stimulation, toxicity, and antagonism of calcium nitrate and manganese chloride as indicated by growth of wheat roots. *Bull. Torrey Bot. Club* 54: 559-577.
- Bartram, H. E. 1916. (182)
Effect of natural low temperature on certain fungi and bacteria. *Jour Agr. Res.* 5: 651-655.
- Bary, A. de. 1860. (183)
La formation de zoöspores. *Ann. Sci. Nat. Bot.* 13: 236-251.
- . 1863. (184)
Recherches sur le développement de quelques champignons parasites. *Ann. Sci. Nat. Bot.* (4 ser.) 20: 5-148.
- . 1886. (184a)
Ueber einige Sclerotinien und Sclerotinienkrankheiten. *Bot. Zeit.* 44: 377-387, 393-404, 409-426, 433-441, 449-461, 465-474.
- Bastin, S. L. 1920. (185)
Does cold kill plants? *Sci. Amer.* 123: 427.
- Batchelor, L. D. 1922. (186)
Winter injury to young walnut trees during 1921-1922. *Calif. Agr. Exp. Sta. Circ.* 234, 1-5.
- . 1922. (187)
Winter injury to young walnut trees during 1921-22. *Calif. Dept. Agr. Mo. Bull.* 11, 445-449.
- and H. S. Reed. 1919. (188)
Winter injury or die-back of the walnut. *Calif. Agr. Exp. Sta. Circ.* 216, 1-20.
- Bates, C. G. and J. Roeser. 1924. (189)
Relative resistance of tree seedlings to excessive heat. *U. S. Dept. Agr., Dept. Bull.* 1263, 1-16.
- Battail, J. 1928. (190)
Contribution aux recherches sur le court-noué. *Proc. Agr. et Vitic.* 89: 600-602.
- Baumann, A. 1885. (191)
Das Verhalten von Zinksalzen gegen Pflanzen und im Boden. *Landw. Vers. Sta.* 31: 1-53.
- Bavendamm, W. 1928. (192)
Neue Untersuchungen über die Lebensbedingungen holzzerstörender Pilze. Ein Beitrag zur Frage der Krankheitsempfänglichkeit unserer Holzpflanzen Gasversuche. *Centbl. Bakt.* 75: 426-452, 503-533.
- Beach, S. A. 1895. (193)
Spraying pear and apple orchards in 1894. *N. Y. (Geneva) Agr. Exp. Sta. Bull.* 84, 1-36.
- . 1897. (194)
Wood ashes and apple scab. *N. Y. (Geneva) Agr. Exp. Sta. Bull.* 140, 663-690.
- and V. A. Clark. 1904. (195)
New York apples in storage. *N. Y. (Geneva) Agr. Exp. Sta. Bull.* 248, 83-152.
- and L. L. Van Slyke. 1892. (196)
Influence of copper compounds in soils upon vegetation. *N. Y. (Geneva) Agr. Exp. Sta. Bull.* 41, 35-43.
- Beach, W. S. 1921. (197)
The lettuce "drop" due to *Sclerotinia minor*. *Pa. Agr. Exp. Sta. Bull.* 165, 1-27.
- . 1922. (198)
The crown rot of rhubarb caused by *Phytophthora cactorum*. *Pa. Agr. Exp. Sta. Bull.* 174, 1-28.
- Beal, J. A. 1926. (199)
Frost killed oak. *Jour. Forestry* 24: 949-950.
- Beauverie, J. 1921. (200)
Zur l'adaptation xérophile des Euphorbes parasitées par des rouilles. *Compt. Rend. Soc. Biol. (Paris)* 84: 401-403.
- . 1923. (201)
On the development of wheat rusts in relation to climatic conditions. *Intern. Conf. Phytopath. and Econ. Ent. Holland Rept.*, 202-203. (Abst.).
- . 1923. (202)
Sur les rapports existant entre le développement des rouilles du Blé et le climat. *Compt. Rend. Acad. Sci. (Paris)* 176: 529-531.

-
1923. (203)
La rouille jaune de Blé (*Puccinia glumarum*). *Compt. Rend. Acad. Sci. (Paris)* 177: 969-971.
-
1924. (204)
Sur la germination des urédospores des rouilles du Blé. *Compt. Rend. Acad. Sci. (Paris)* 179: 993-996.
- Beeley, F. 1930. (204a)
Notes on recent observations on *Oidium heveae*. *Quart. Jour. Rubber Res. Inst. Malay* 2: 182-183.
- Beijerinck, M. W. 1899. (205)
Über ein Contagium vivum fluidum als Ursache der Fleckenkrankheit des Tabaksblätter. *Centbl. Bakt.* 5: 27-33.
- Bellair, G. 1896. (206)
La chlorose des arbres fruitiers. *Rev. Hort.* 68: 110-111.
- Belyea, H. C. 1925. (207)
Wind and exposure as limiting factors in the establishment of forest plantations. *Ecology* 6: 238-240.
-
- and H. J. MacAloney. 1926. (208)
Weather injury to terminal buds of Scotch pine and other conifers. *Jour. Forestry* 24: 685-690.
- Benedict, D. M. 1929. (209)
A greenhouse study of the conidial stroma of *Epichloe typhina*. *Mich. Acad. Sci.* 9: 47-54.
- Benedict, R. C. 1916. (210)
Snow injury to trees. *Torreya* 16: 71.
- Benes, G. 1928. (211)
Le court noué. *Prog. Agr. et Vitic.* 89: 524-529.
-
1928. (212)
De l'influence que peut exercer l'acide phosphorique sur la résistance des plantes au mildiou. *Prog. Agr. et Vitic.* 90: 80-81.
- Benincasa, M. 1902. (213)
Ricerche sui mezzi per difendere i somenai di tabacco dal "marciume radicale" causato dalla *Thielavia basicola* Zopf. *Bol. Tecnic. Coltiv. Tabacchi* 1: 24-33.
- Bennett, C. W. 1921. (214)
A phoma root rot of celery. *Mich. Agr. Exp. Sta. Tech. Bull.* 53, 1-40.
-
1926. (215)
Arsenical injury to peach. *Mich. Agr. Exp. Sta. Quart. Bull.* 8: 183-185.
- Bennett, F. T. 1928. (216)
On *Dematium pullulans* De B. and its ascigerous stage. *Ann. Appl. Biol.* 15: 371-391.
- Bennett, J. P. and E. T. Bartholomew. 1924. (217)
The respiration of potato tubers in relation to the occurrence of blackheart. *Calif. Agr. Exp. Sta. Tech. Paper* 14, 1-35.
- Benoist, J. and P. Bailly. 1922. (218)
Moyens de combattre le piétin des céréales. *La Vie Agr. et Rurale* 11: 266-268.
- Bensaude, M. 1926. (219)
Diseases of economic plants in the Azores. *Kew Bull. Misc. Inform. (9)*, 381-389.
-
1929. (220)
Note sur le *Phytophthora*, parasite des Citrus au Portugal. *Compt. Rend. Soc. Biol. (Paris)* 101: 982-984.
-
- and G. W. Keitt. 1928. (221)
Comparative studies of certain *Cladosporium* diseases of stone fruits. *Phytopath.* 18: 313-329.
- Berger, A. 1924. (222)
Kranke Pflanzenbestände—saure Böden. *Illus. Landw. Zeit.* 44: 257.
- Bergman, H. F. 1921. (223)
The effect of cloudiness on the oxygen content of water and its significance in cranberry culture. *Amer. Jour. Bot.* 8: 50-58.
- Bergman, H. T. 1920. (224)
The relation of aeration to the growth and activity of roots and its influence on the ecesis of plants in swamps. *Ann. Bot.* 34: 13-33.
- Berkeley, G. H. 1924. (225)
Studies on *Botrytis*. *Trans. Roy. Canadian Inst.* 15: 83-127.

- _____. 1929. (226)
Report of the Dominion Field Laboratory of Plant Pathology, St. Catharines, Ontario.
Rept. Dominion Botanist, Div. Bot., Canada Dept. Agr., 1928, 119-130.
- Bernard, C. 1924. (227)
Wortelzielsten bij thee en rubber. *De Thee* 5: 75-79.
- Bernbeck, O. 1911. (228)
Der Wind als pflanzenpathologischer Faktor. Diss. Bonn. 1907 and Bot. Jahrb. Engler
45: 471-482.
- Berridge, E. M. 1924. (229)
The influence of hydrogen-ion concentration on the growth of certain bacterial plant
parasites and saprophytes. *Ann. Appl. Biol.* 11: 73-85.
- Bewley, W. F. 1921. (231)
"Damping off" and "foot rot" of tomato seedlings. *Ann. Appl. Biol.* 7: 156-172.
- _____. 1922. (232)
"Sleepy disease" of the tomato. *Ann. Appl. Biol.* 9: 116-134.
- _____. 1923. (233)
"Sleepy disease" of the tomato. *Jour. Min. Agr. Great Britain* 30: 450-457.
- _____. 1929. (234)
The effect of environmental conditions on plant diseases under glass. *Ann. Appl. Biol.*
16: 190-192.
- _____. and W. Corbett. 1927. (235)
"Mosaic" disease of the tomato. *Exp. and Res. Sta., Cheshunt, Herts., Ann. Rept.* 13,
51-59.
- _____. and H. L. White. 1926. (236)
Some nutritional disorders of the tomato. *Ann. Appl. Biol.* 13: 323-338.
- Bews, J. W. and R. D. Aitken. 1922. (237)
The measurement of the hydrogen ion concentration in South African soils in relation to
plant distribution and other ecological problems. *So. African Jour. Sci.* 19: 196-206.
- Biewenga, E. 1929. (238)
Kaligehalt und die "Blaufleckigkeit" der Kartoffeln. *Ernähr. d. Pflanze* 25: 468.
(Abst.).
- Biffin, R. H. 1912. (239)
Studies on the inheritance of disease resistance. II. *Jour. Agr. Sci.* 4: 421-429.
- _____. 1913 (240)
Investigations on the control of disease in plants. *Jour. Roy. Hort. Soc., London*, 39
(2): 313-323.
- Bijl, P. A. Van der. 1916. (241)
"Wilt" or "crown-rot" disease of carnations caused by *Fusarium* sp. *Ann. Appl. Biol.*
2: 267-290.
- Bioletti, F. T. 1896. (242)
Sunstroke of the vine. *Rept. Calif. Vitic. Work.* 1887-1895, 450-451.
- Bird, M. 1925. (243)
Soil hygiene in its relation to cane "disease". *Intern. Sugar Jour.* 27: 423-424,
536-537.
- Birmingham, W. A. 1924. (244)
A "shrivel" condition of grape berries. *Agr. Gaz. N. S. Wales* 35: 669-671.
- _____. 1926. (245)
Frost blister of vegetables. *Agr. Gaz. N. S. Wales* 37: 319-322.
- Bisby, G. R. 1919. (246)
Studies on *Fusarium* diseases of potatoes and truck crops in Minnesota. *Minn. Agr.*
Exp. Sta. Bull. 181, 1-58.
- Blackman, F. F. 1909. (247)
Vegetation and frost. *New Phytol.* 8: 354-363.
- Blackman, V. H. 1924. (248)
Physiological aspects of parasitism. *Nature* 114: 231-232.
- _____. 1925. (249)
Physiological aspects of parasitism. *Brit. Assoc. Adv. Sci. Rept.* 92: 233-246.
- Blackwell, C. P. and G. H. Collings. 1920. (250)
Trona potash: A progress report. *S. C. Agr. Exp. Sta. Bull.* 202, 1-24.
- Blain, W. H. 1927. (251)
Pecan scab and its control by means of sprays. *Ala. Agr. Exp. Sta. Ann. Rept.* 38, 17-18.
- Blair, A. W. and B. E. Brown. 1921. (252)
The influence of fertilizers containing borax on the yield of potatoes and corn.—Season
1920. *Soil Sci.* 11: 369-383.

- _____ and A. L. Prince. 1923. (253)
 Studies on the toxic properties of soils. *Soil Sci.* 15: 109-129.
- _____ and _____. 1927. (254)
 The relation of soil reaction to active aluminum. *Soil Sci.* 24: 205-213.
- Blake, M. A. 1918. (255)
 Winter injury to fruit trees in New Jersey. *Proc. Amer. Soc. Hort. Sci.* 15: 24-25.
- _____. 1918. (256)
 Winter injury to fruit trees. *Proc. N. J. State Hort. Soc.* 44: 106-110.
- _____ and A. J. Farley. 1910. (257)
 Stem rot of carnations. *N. J. Agr. Exp. Sta. Ann. Rept.* 31, 78-81.
- _____, M. T. Cook, and C. H. Connors. 1921. (258)
 Recent studies on peach yellows and little peach. *N. J. Agr. Exp. Sta. Bull.* 356, 1-62.
- Blakeslee, A. F. and C. D. Jarvis. 1913. (259)
 Common injuries to shade trees. Injuries caused by gas and smoke. *Trees in Winter*, 124-125.
- Blaringhem, L. 1912. (260)
 Observations sur la rouille des Guimauves (*Puccinia malvacearum* Mont.). *Bull. Soc. Bot. France* 59: 765-773.
- _____. 1923. (261)
 Variabilité de la sporulation de la rouille des Charohns. I. Notes sur la biologie des rouille et des Guimauves (*Puccinia malvacearum* Mont.) sur les plantes vertes et sur les plantes panachées de *Lavatera arborea* L. *Rev. Path. Vég. et Ent. Agri.* 10: 172-182.
- Blattny, C. and F. Duchon. 1928. (262)
 Beitrag zur Frage der Düngung des Hopfens als Mittel gegen die Hopfenperonospora (*Pseudoperonospora humuli*). *Ernähr. d. Pflanze* 24: 140-142.
- Blochwitz, A. 1930. (263)
 Standorte und geographische Verbreitung der Schimmelpilze. *Ann. Mycol.* 28: 241-268.
- Blodgett, F. H. 1916. (264)
 Relation between storm and disease, August and September 1915, in Texas. *Phytopath.* 6: 100-101. (Abst.).
- _____. 1918. (265)
 Weather conditions and crop diseases in Texas. *Mem. Torrey Bot. Club* 17: 74-78.
- Blumer, J. C. 1908. (266)
 Some effects of frost in the Southwest. *Torreya* 8 (2): 25-26.
- Blumer, S. 1927. (267)
 Ueber den Einfluss äusserer Faktoren auf die Entwicklung der Mehltäupilze. *Mitt. Natur. Gesell. Bern.* 27: 27-28.
- Bobko, E. W. et al. 1925. (268)
 Zur Frage über die schädliche Wirkung höher Kalkgaben. *Zeitschr. Pflanzenernähr. u. Düng.* 6: 128-168.
- _____ and R. A. Papowa. 1929. (269)
 Beiträge zur Frage über die Dürre und Kälteresistenz der Pflanzen. *Zeitschr. Pflanzenernähr. u. Düng.* 14: 24-37.
- Bodine, E. W. and L. W. Durrell. 1930. (270)
 Inoculation of wheat with *Tilletia levis* (Kühn). *Phytopath.* 20: 663-668.
- Bodnár, J. 1914. (271)
 Biochemische Untersuchung der Wurzelfäule der Zuckerrübe. *Bot. Centbl.* 126: 644. (Abst.).
- Böhm, J. 1874. (272)
 Ueber die Einwirkung des Leuchtgases auf die Pflanzen. *Bot. Zeit.* 32: 74-75.
- _____. 1881. (273)
 Ueber die Ursache des Absterbens der Götterbäume und über die Methode der Neubepflanzung der Ringstrasse in Wien. *Wien.*
- Boisjeau, A. 1914. (274)
 Le piétin du blé. *Prog. Agr. et Vitic.* 61: 242-247.
- Bois, D. 1917. (275)
 Dégâts causés par le froid dans le Midi de la France. *Soc. Path. Vég. France Bull.* 4: 50-51.
- Bolhuis, G. G. 1929. (276)
 Kalidüngung und Nachtfrostgefahr. *Ernähr. d. Pflanze* 25: 586.
- Bolle, P. C. 1930. (277)
 Different forms of top rot. *Proc. Internat. Soc. Sugar Cane Technologists*, 3rd Cong., 146-155.

- Bolley, H. L. 1889. (278)
Wheat rust. Ind. Agr. Exp. Sta. Bull. 26, 1-19.
- _____. 1890. (279)
Potato scab: a bacterial disease. Agr. Sci. 4: 277-287.
- _____. 1899. (280)
Smut of cereals. N. D. Agr. Exp. Sta. Ann. Rept. 9, 24-28.
- _____. 1904. (281)
Cause of wheat rust, its method of attack, conditions favorable to infection and rust development; and what to do. N. D. Agr. Exp. Sta. Press Bull. 20, 1-7.
- _____. 1907. (282)
Plans for procuring disease resistant crops. Proc. Soc. Prom. Agr. Sci. 28: 107-114.
- _____. 1909. (283)
Some results and observations noted in breeding cereals in a specially prepared disease garden. Proc. Amer. Breed. Assoc. 5: 177-182.
- _____. and F. J. Pritchard. 1906. (284)
Rust problems. N. D. Agr. Exp. Sta. Bull. 68, 605-672.
- Bonar, L. 1920. (285)
Wilt of white clover, due to *Brachysporium trifolii*. Phytopath. 10: 435-441.
- _____. 1924. (286)
Studies on the biology of *Brachysporium trifolii*. Amer. Jour. Bot. 11: 123-158.
- Bonquet, P. A. 1916. (287)
Presence of nitrites and ammonia in diseased plants. Its significance with regard to crop rotation and soil depletion. Jour. Amer. Chem. Soc. 38: 2572-2576.
- _____. 1917. (287a)
A bacterial organism found associated with curly top of the sugar beet. Phytopath. 7: 269-289.
- _____. 1922. (288)
Progress report on June drop of oranges. Citrus Leaves 2 (10): 12, 15-17.
- Bonde, R. 1929. (289)
Physiological strains of *Alternaria solani*. Phytopath. 19: 533-548.
- Böning, K. 1926. (290)
Beobachtungen über Vegetations-schäden durch Teerdämpfe. Forsch. Gebiet. Pflanzenkr. u. Immun. im Pflanzenreich 2: 79-88.
- Bonns, W. W. 1911. (291)
Orchard spraying problems and experiments: A review of, and a contribution to previous data. Me. Agr. Exp. Sta. Bull. 189, 31-80.
- _____. 1912. (292)
Orchard spraying experiments. Me. Agr. Exp. Sta. Bull. 198, 1-32.
- Boodle, L. A. 1920. (293)
The scorching of foliage by sea-winds. Jour. Min. Agr. Great Britian 27: 479-486.
- Börner, M., E. Haselhoff, and J. König. 1892. (294)
Ueber die Schädlichkeit von Sodastaub u. Ammoniakgas auf die Vegetation. Landw. Jahrb. 21: 407-425.
- _____, _____, and _____. 1893. (295)
Über die Schädlichkeit von Sodastaub und Ammoniakgas auf die Vegetation. Zeitschr. Pflanzenkr. 3: 98-100. (Abst.).
- Borthwick, A. W. 1909. (296)
Frost canker of *Picea sitchensis*. Roy. Bot. Gard., Edinb., 29: 263-265.
- _____. 1928. (297)
Frost damage to young coniferous trees. Scottish Forestry Jour. 42: 63-68.
- Boshart, K. 1926. (298)
Beobachtungen über Pfefferminzrost. Heilund Gewürzpfl. 9: 24-30.
- Botjes, J. O. 1926. (299)
The blue discoloration of potatoes. (Trans. title). Tijdschr. o. Plantenziekten 33: 57-96.
- _____. 1929. (300)
Iets over het verband tusschen hét "blauw" van de Aardappelknollen en kaligebrek. Tijdschr. o. Plantenziekten 35: 5-8.
- Bower, P. H. et al. 1930. (301)
Purification and certain properties of the virus of typical tomato mosaic. Phytopath. 20: 943-950.
- Bowles, E. A. 1919. (302)
The effect of the frosts of the winter of 1916-17 on vegetation. Jour. Roy. Hort. Soc. 43: 388-461.

- Boyce, J. S. 1926. (303)
Observations on white pine blister rust in Great Britian and Denmark. Jour. Forestry 24: 893-896.
- Boyd, O. C. 1930. (304)
A bacterial disease of the tung-oil tree. Phytopath. 20: 756-758.
- Boyle, C., M. Murphy, and H. A. Cummins. 1928. (305)
"Blossom-wilt" of apple trees and "wither-tip" of plum trees, with special reference to two biologic forms of *Monilia cinerea* Bon. Sci. Proc. Roy Dublin Soc. n. s. 19: 63-76.
- Braak, C. 1928. (306)
Voorspelling van de aardappelziekte in verband met meteorologische factoren. Landb. Tijdschr. 40: 628-630.
- Bradford, F. C. 1922. (307)
Winter injury of fruit in Missouri. Mo. Agr. Exp. Sta. Circ. 107, 1-7.
- and H. A. Cardinell. 1922. (308)
Observations on winter injury. Mo. Agr. Exp. Sta. Res. Bull. 56, 1-26.
- and —. 1926. (309)
Eighty winters in Michigan orchards. Mich. Agr. Exp. Sta. Spec. Bull. 149, 1-103.
- Brandes, E. W. 1918. (310)
Anthracnose of lettuce caused by *Marssonina panattoniana*. Jour. Agr. Res. 13: 261-280.
- , 1919. (311)
Banana wilt. Phytopath. 9: 339-389.
- Bratley, C. O. 1930. (312)
Notes on flooding injury to strawberries. Phytopath. 20: 685-686.
- Braun, H. 1924. (313)
Geranium stemrot caused by *Pythium complectens*, n. sp. Jour. Agr. Res. 29: 399-419.
- Braun, K. 1914. (314)
Beiträge zur Kenntnis der Blattflecken an *Sisalagaven*. Pflanzen 10: 188-197.
- Breazeale, J. F. and J. A. LeClerk. 1912. (315)
The growth of wheat seedlings as affected by acid or alkaline conditions. U. S. Dept. Agr., Bur. Chem. Bull. 149, 1-18.
- Breckenbridge, J. E. 1921. (316)
Boron in relation to the fertilizer industry. Jour. Ind. and Eng. Chem. 13: 324-325.
- Brefeld, O. 1888. (317)
Neue Untersuchungen ueber Brandpilze und die Brandkrankheiten II. Nachtr. Klub. Landw., Berlin, 1577-1584, 1588-1594, 1597-1701.
- , 1895. (318)
Infectionen mit Flugbrandconidien auf Hafer und Gerste. Untersuchungen Gesamtgebiete Mykologie 11: 23-42.
- Brega, C. 1927. (319)
The influence of seeding time on the development of cereal rusts. (Trans. title). Riv. Patol. Veg. 17: 153-156.
- Bremer, H. 1923. (320)
Untersuchungen über Biologie und Bekämpfung des Erregers der Kohlhernie, *Plasmodiophora brassicae* Woronin. Landw. Jahrb. 59: 227-243.
- , 1924. (321)
Das auftreten der Schorfkrankheit am Apfelbaum *Fusicladium dendriticum* (Wallr.) Fuck. in seinen Beziehungen zum Wetter. Angew. Bot. 6: 77-97.
- , 1924. (322)
Wissenwertes aus der Arbeit in- und ausländischer Versuchsstationen und Institute IV, Apfelschorffahre und Wetter. Deut. Obst- u. Gemüsebau Zeit. 70: 96-97.
- , 1924. (323)
Untersuchungen über Biologie und Bekämpfung des Erregers der Kohlhernie, *Plasmodiophora brassicae* Woronin. II. Kohlhernie und Bodenazidität. Landw. Jahrb. 60: 673-685.
- , 1926. (324)
Ausbaumöglichkeiten in der Pflanzenschutzstatistik. (Beispiel: Die Bezeihungen des Apfelsfusikladiums zum Wetter.). Nachrichtenbl. Deut. Pflanzenschutzdienst 6: 1-2, 12-13.
- Brenchley, W. E. 1910. (325)
The influence of copper sulphate and manganese sulfate upon the growth of barley. Ann. Bot. 24: 571-583.
- , 1914. (326)
On the action of certain compounds of zinc, arsenic and boron on the growth of plants. Ann. Bot. 28: 283-301.

- _____. 1914. (337)
Inorganic plant poisons and stimulants. Cambridge.
- _____. and H. G. Thornton. 1925. (338)
The relation between the development, structure and functioning of the nodules on *Vicia faba* as influenced by the presence or absence of boron in the nutrient medium. *Proc. Roy. Soc., London*, 98B: 373-400.
- _____. and K. Warington. 1927. (339)
The rôle of boron in the growth of plants. *Ann. Bot.* 41: 167-187.
- Brentzel, W. E. 1923. (340)
Disease of flax caused by a species of *Rhizoctonia*. *Phytopath.* 13: 53. (Abst.).
- _____. 1926. (341)
The pasmo disease of flax. *Jour. Agr. Res.* 32: 25-37.
- Brewer, F. H. and R. H. Carr. 1927. (342)
Fertility of a soil as related to the forms of its iron and manganese. *Soil Sci.* 23: 165-173.
- _____. et al. 1929. (343)
Purification and certain properties of the tomato mosaic virus. *Phytopath.* 19: 108. (Abst.).
- _____. et al. 1930. (344)
Purification and certain properties of the virus of typical tomato mosaic. *Phytopath.* 20: 943-950.
- Briem, H. 1905. (345)
Wurzelbrandentdeckung und kein Ende. *Blüt. Zuckerrübenbau* 12: 164-166.
- Brierley, P. 1928. (346)
Pathogenicity of *Bacillus mesentericus*, *B. aroideae*, *B. carotovorus*, and *B. phytophthorus* on potato tubers. *Phytopath.* 18: 819-837.
- Briggs, L. J. 1908. (347)
The field treatment of tobacco root-rot. U. S. Dept. Agr., Bur. Pl. Ind., Circ. 7, 1-8.
- _____. C. A. Jensen, and J. W. McLane. 1916. (348)
Mottle-leaf of citrus trees in relation to soil conditions. *Jour. Agr. Res.* 6: 721-739.
- _____. _____, and _____. 1917. (349)
The mulched-basin system of irrigated citrus culture and its bearing on the control of mottle-leaf. U. S. Dept. Agr., Dept. Bull. 499, 1-31.
- Brisley, H. R. 1923. (350)
Studies on the blight of cucurbits caused by *Macrosporium cucumerinum* E. and E. *Phytopath.* 13: 199-204.
- Britton-Jones, H. R. 1920. (351)
The rusts and smuts of wheat, barley, and oats. *Egypt Min. Agr. Tech. and Sci. Serv. Bull.* 15, 1-16.
- _____. 1928. (352)
Wilt disease of coconut palms in Trinidad I. *Trop. Agric.* 5 (May Suppl.): 1-12.
- _____. 1929. (353)
Wilt diseases of coconut palms in Trinidad II. *Trop. Agric.* 6 (12): 1-12.
- Brittlebank, C. C. 1912. (354)
Eruptive disease, or "Exanthema" of orange trees in Australia. *Jour. Dept. Agr. Victoria* 10: 401-404.
- _____. 1914. (355)
Plane tree leaf scorch. *Jour. Dept. Agr. Victoria* 12: 335-336.
- _____. 1919. (356)
Green manurial crops and "take all". *Jour. Dept. Agr. Victoria* 17: 171-174.
- Britton, E. G. 1904. (357)
The effect of illuminating gas on trees and shrubs. *Torreya* 4: 172-173.
- Britton, W. E. 1896. (358)
Blight, burn or scald of tomato plants. *Conn. Agr. Exp. Sta. Ann. Rept.* 20, 232-234.
- _____. 1928. (359)
Oil sprays and oil injury. *Jour. Econ. Ent.* 21: 418-421.
- Brizi, U. 1903. (360)
Sulle alterazioni prodotte alle piante coltivate dalle principali emanazioni gassose degli Stabilimenti industriali. *Staz. Sper. Agr. Ital.* 36: 279-384.
- _____. 1905. (361)
Ricerche sulla malattia del detta "brusone". *Ann. Inst. Agr., Ponti*, 5: 79-85.
- Broadfoot, W. C. 1926. (362)
Studies on the parasitism of *Fusarium lini* Bolley. *Phytopath.* 16: 951-978.

- Brock, A. A. 1929. (363)
Oil spray damage to citrus. Calif. St. Dept. Agr. Mo. Bull. 18 (10): 571-572.
- Brongniart, A. 1845. (364)
Action des sels de fer sur la végétation. Rev. Hort. 291-298.
- Brooks, A. N. 1926. (365)
Studies on the epidemiology and control of fireblight of apple. Phytopath. 16: 665-696.
- Brooks, C. 1906. (366)
Temperature and toxic action. Bot. Gaz. 42: 359-375.
- _____. 1908. (367)
Pine blight. N. H. Agr. Exp. Sta. Ann. Rept. 29, 370-371.
- _____. 1908. (368)
The fruit spot of apples. Bull. Torrey Bot. Club 35: 423-456.
- _____. 1909. (369)
Some apple diseases. N. H. Agr. Exp. Sta. Bull. 144, 107-138.
- _____. 1914. (370)
Blossom-end rot of tomatoes. Phytopath. 4: 345-373.
- _____. and J. S. Cooley. 1916. (371)
Apple scald. Phytopath. 6: 110-111. (Abst.).
- _____. and _____. 1916. (372)
Temperature relations of apple rot fungi. Phytopath. 6: 111. (Abst.).
- _____. and _____. 1917. (373)
Temperature relations of apple rot fungi. Phytopath. 7: 76. (Abst.).
- _____. and _____. 1917. (374)
Temperature relations of apple-rot fungi. Jour. Agr. Res. 8: 139-163.
- _____. and _____. 1917. (375)
Effect of temperature, aeration and humidity on Jonathan-spot and scald of apples in storage. Jour. Agr. Res. 11: 287-317.
- _____. and _____. 1918. (376)
Air movement as a factor in the prevention of apple scald. Phytopath. 8: 69. (Abst.).
- _____. and _____. 1921. (377)
Temperature relations of stone fruit fungi. Jour. Agr. Res. 22: 451-465.
- _____. and _____. 1928. (378)
Time-temperature relations in different types of peach-rot infection. Jour. Agr. Res. 37: 507-543.
- _____. _____, and D. F. Fisher. 1919. (379)
Apple-scald. Jour. Agr. Res. 16: 195-217.
- _____. _____, and _____. 1920. (380)
Diseases of apples in storage. U. S. Dept. Agr., Farmers' Bull. 1160, 1-24.
- _____. _____, and _____. 1923. (381)
Apple scald and its control. U. S. Dept. Agr., Farmers' Bull. 1380, 1-16.
- _____. and D. F. Fisher. 1916. - (382)
Spot diseases of the apple causing much general confusion. Better Fruit 10 (8): 13-15.
- _____. and _____. 1918. (383)
Irrigation experiments on apple-spot diseases. Jour. Agr. Res. 12: 109-137.
- _____. and _____. 1924. (384)
Prune and cherry brown-rot investigations in the Pacific Northwest. U. S. Dept. Agr., Dept. Bull. 1252, 1-21.
- _____. and _____. 1926. (385)
Water-core of apples. Jour. Agr. Res. 32: 223-260.
- Brooks, F. T. 1908. (386)
Observations on the biology of Botrytis cinerea. Ann. Bot. 22: 479-487.
- _____. 1921. (387)
The inheritance of disease resistance in plants. Trans. Brit. Mycol. Soc. 7: 71-78.
- _____. 1924. (388)
Epidemic plant diseases. Trans. Brit. Mycol. Soc. 9: 229-239.
- _____. 1928. (389)
Disease resistance in plants. New Phytol. 27: 85-97.
- Brown, A. M. and M. Newton. 1928. (390)
The dwarf leaf rust of barley in western Canada. (Puccinia anomala Rostr.). Phytopath. 18: 481. (Abst.).
- Brown, B. E. 1922. (391)
Effect of borax in fertilizer on the growth and yield of potatoes. U. S. Dept. Agr., Dept. Bull. 998, 1-8.

- _____. 1930. (392)
Note regarding a possible influence of soil reaction on development of powdery mildew on cowpeas. *Phytopath.* 20: 683-685.
- Brown, E. 1927. (393)
Effect of shade on apple scab. *Gardeners' Chron.* 81: 305-306.
- Brown, H. D. 1921. (394)
Sweet pea bud drop. *Florists' Exch.* 51: 545.
- Brown, J. G. 1928. (395)
The influence of alkali in soils on the prevalence of angular leaf-spot in Pima-Egyptian cotton. *Univ. Chicago Sci. Ser.* 4: 259-261.
- _____. 1928. (396)
The influence of sodium chloride in alkali soils on the susceptibility of Pima cotton to angular leaf-spot caused by *Phytomonas malvacera*. *Phytopath.* 18: 951. (Abst.).
- Brown, N. A. 1913. (397)
A bacterium causing a disease of sugar-beet and nasturtium leaves. *Jour. Agr. Res.* 1: 188-210.
- _____. 1915. (398)
A bacterial disease of lettuce. *Jour. Agr. Res.* 4: 475-478.
- _____. 1918. (399)
Some bacterial diseases of lettuce. *Jour. Agr. Res.* 13: 367-388.
- _____. 1923. (400)
Bacterial leaf spot of geranium in the eastern United States. *Jour. Agr. Res.* 23: 361-372.
- _____. 1928. (401)
Bacterial pocket disease of the sugar beet. *Jour. Agr. Res.* 37: 155-168.
- Brown, S. M. 1927. (402)
The effect of boron on citrus trees. *Citrus Leaves* 7 (7): 21-23.
- Brown, W. 1922. (403)
On the germination and growth of fungi at various temperatures and in various concentrations of oxygen and of carbon dioxide. *Ann. Bot.* 36: 257-283.
- Brown, W. S. 1915-1920. (404)
The December freeze—some lessons from it. *Ore. Agr. Exp. Sta., Crop Pest and Hort. Rept.* 3: 9-14.
- Bruck, W. F. 1906. (405)
Zur Frage der Windbeschädigungen an Blättern. *Beih. Bot. Centbl.* II Abt. 20: 67-75.
- Bruderlin, J. 1917. (406)
Le *Rhizopus maydis*, n. sp. *Bull. Soc. Bot. Genève, Ser. 2*, 9: 108-112.
- Bruyn, H. De. 1926. (407)
Waarnemingen over de vatbaarheid van het loof van de Aardappelplant voor de Aardappelziekte. *Tijdschr. Plantenziekten* 32: 1-29.
- _____. 1926. (408)
The overwintering of *Phytophthora infestans* (Mont.) DeBy. *Phytopath.* 16: 121-140.
- Bryan, M. K. 1915. (409)
A nasturtium wilt caused by *Bacterium solanacearum*. *Jour. Agr. Res.* 4: 451-457.
- _____. 1921. (410)
A bacterial bud rot of cannas. *Jour. Agr. Res.* 21: 143-152.
- _____. 1924. (411)
Bacterial leafspot of *Delphinium*. *Jour. Agr. Res.* 28: 261-269.
- _____. 1928. (412)
Lilac blight in the United States. *Jour. Agr. Res.* 36: 225-235.
- _____. 1929. (413)
The relation of moisture to stomatal infection. *Phytopath.* 19: 750.
- _____. 1930. (414)
Bacterial leaf spot of squash. *Jour. Agr. Res.* 40: 385-391.
- _____. 1930. (415)
Studies on bacterial canker of tomato. *Jour. Agr. Res.* 41: 825-851.
- _____. and O. C. Boyd. 1930. (416)
Control of bacterial canker of tomatoes. *Phytopath.* 20: 127. (Abst.).
- _____. and F. P. McWhorter. 1930. (417)
Bacterial blight of poppy caused by *Bacterium papavericola*, sp. nov. *Jour. Agr. Res.* 40: 1-9.

- Bryan, O. C. 1929. (418)
The stimulating effect of external applications of copper and manganese on certain chlorotic plants of the Florida Everglades soil. Jour. Amer. Soc. Agron. 21: 923-933.
- Bryce, A. 1923. (419)
The toxicity of lime to *Fomes lignosus* Klotzsch. Dept. Agr. Ceylon Bull. 64, 1-17.
- Bubák, F. 1902. (420)
Über eisenfleckige Kartoffeln. Zeitschr. Landw. Versuchsw. Oesterr. 5: 396-398.
- Buchet, S. 1913. (421)
Sur la transmission des Rouilles en général et du *Puccinia malvacearum* en particulier. Bull. Soc. Bot. France 60: 520-524, 558-565.
- Buchheim, A. 1928. (422)
Biologisch-morphologische Untersuchungen an Erysiphaceen. Ber. Deutsch. Bot. Ges. 46: 167-180.
- Bucholski. 1926. (423)
Beobachtungen über die befallstärke des gelbrostes (*Puccinia glumarum*) bei winterweizen. Pflanzenbau, Berlin, 3 (7): 106-107.
- Buck, F. S. 1918. (424)
Winter injury to ornamental trees and shrubs. Pomol. and Fruit Growers' Soc., Quebec, Ann. Rept. 47-53.
- Buckhout, W. A. 1900. (425)
The effect of smoke and gas upon vegetation. Pa. Dept. Agr. Rept. 1900 (1), 164-192.
- . 1901. (426)
The effect of smoke and gas upon vegetation. Pa. Agr. Exp. Sta. Ann. Rept. 1900-01, 297-324.
- Buddin, W. and E. M. Wakefield. 1924. (427)
Some observations on the growth of *Rhizoctonia crocorum* (Pers.) D. C. in pure culture. Ann. Appl. Biol. 11: 292-309.
- Buffum, B. C. 1896. (428)
Alkali: Some observations and experiments. Wyo. Agr. Exp. Sta. Bull. 29, 219-253.
- Burger, O. F. 1926. (429)
Report of the plant pathologist. Fla. Agr. Exp. Sta. Ann. Rept. 68-83.
- . 1927. (430)
Report of the plant pathologist. Fla. Agr. Exp. Sta. Ann. Rept. 62-77.
- , E. F. DeBusk, and W. R. Briggs. 1923. (431)
Preliminary report on controlling melanose. Fla. Agr. Exp. Sta. Bull. 167, 123-140.
- Burgess, P. S. and F. R. Pember. 1923. (432)
"Active" aluminum as a factor detrimental to crop production in many acid soils. R. I. Agr. Exp. Sta. Bull. 194, 1-40.
- and G. G. Pohlman. 1928. (433)
Citrus chlorosis as affected by irrigation and fertilizer treatments. Ariz. Agr. Exp. Sta. Bull. 124, 183-232.
- Burk, H. 1923. (434)
Zur Steinbrandbekämpfung des Weizens. Zeitschr. Pflanzenkr. 33: 193-240.
- Burke, E. 1924. (435)
Orchard injury from water-logged soils. Mont. Agr. Exp. Sta. Ann. Rept. 30, 27.
- et al. 1928. (436)
Overcoming yellowing of apple tree leaves. Mont. Agr. Exp. Sta. Ann. Rept. 34, 90.
- Burkholder, W. H. 1920. (437)
The effect of two soil temperatures on the yield and water relations of healthy and diseased bean plants. Ecology 1: 113-123.
- . 1924. (438)
The effect of varying soil moisture on healthy bean plants and on those infected by a root parasite. Ecology 5: 179-187.
- . 1926. (439)
A new bacterial disease of the bean. Phytopath. 16: 915-927.
- Burrill, T. J. and J. T. Barrett. 1909. (440)
Ear rots of corn. Ill. Agr. Exp. Sta. Bull. 133, 63-109.
- Burroughs, A. M. 1923. (441)
Effects of oil sprays on fruit trees. Proc. Amer. Soc. Hort. Sci. 20: 269-277.
- Busquet, A. 1928. (442)
Sur le court-noué. Prog. Agr. et Vitic. 89: 354-357.
- Butler, E. J. 1905. (443)
The bearing of Mendelism on the susceptibility of wheat to rust. Jour. Agr. Sci. 1: 361-363.

- _____. 1906. (444)
Fungus diseases of sugar-cane in Bengal. Mem. Dept. Agr. India, Bot. Ser. 1 (3): 1-53.
- _____. 1918. (445)
Immunity and disease in plants. Agr. Jour. India (Special Indian Sci. Cong. Number) 13: 10-82.
- _____. 1918. (446)
Fungi and disease in plants. Calcutta.
- _____. 1923. (447)
The effect of climate on cereal diseases. Pan-Pacific Sci. Cong. Proc. 1 (4): 126-131.
- _____. 1925. (448)
Las condiciones meteorológicas y los enfermedades de las plantas. Bol. Agr. Téc. y Econ. 17: 361-378.
- _____. 1925. (449)
Meteorological conditions and plant diseases. Intern. Rev. Sci. and Pract. Agr. n. s. 3: 369-384.
- _____. 1928. (450)
Report on some diseases of tea and tobacco in Nyasaland. Dept. Agr. Nyasaland 1-30.
- _____. and J. M. Hayman. 1906. (451)
Indian wheat rusts. Mem. Dept. Agr. India, Bact. Ser. 1 (2): 1-52.
- Butler, L. F. 1930. (452)
Corticium centrifugum, a heterothallic pathogene of apples. Jour. Agr. Res. 41: 269-294.
- Butler, O. 1905. (453)
Observations on some vine diseases in Sonoma County, California. Calif. Agr. Exp. Sta. Bull. 168, 1-29.
- _____. 1911. (454)
A study on gummosis of prunus and citrus, with observations on Squamosis and Exanthema of the Citrus. Ann. Bot. 25: 107-153.
- _____. 1928. (455)
When do fungicides damage plants? N. H. Agr. Exp. Sta. Bull. 232, 10.
- _____. 1930. (456)
Agricultural experiments 1929. N. H. Agr. Exp. Sta. Bull. 250, 1-31.
- _____. and R. R. Jenkins. 1930. (457)
Effect on plants of cyanide fumigation following spraying with bordeaux mixture. Phytopath. 20: 419-429.
- Butters, F. K. and C. O. Rosendahl. 1911. (458)
Some effects of severe frost upon vegetation in a condition of active growth. Minn. Bot. Studies 4 (2): 153-159.
- Cadoret, A. 1917. (459)
Les pluies et le mildiou. Prog. Agr. et Vitic. 67: 588-589.
- _____. 1927. (460)
Contribution à l'étude des traitements contre le mildiou. Determination des époques d'attaques du champignon. Prog. Agr. et Vitic. 87: 362-365.
- _____. 1927. (461)
Les grandes pluies d'août et la bouille bleue. Prog. Agr. et Vitic. 88: 231-232.
- Caesar, L. 1913. (462)
Pear blight, little peach, yellows, apple scab, winter injury. Ont. Agr. Col. and Exp. Farm Ann. Rept. 39, 29-31.
- _____. 1925. (463)
Spray injury in Ontario in 1924. Canadian Hort. 48: 5.
- Cahill, V. 1929. (464)
Experiments for the control of exanthema in Japanese plum trees. Jour. Dept. Agr. W. Aust., Ser. 2, 6: 388-393.
- Calvino, E. M. de. 1925. (465)
Effects of a hail storm on sugar cane and other cultivated plants. La Planter 74: 450-451.
- Cameron, C. A. 1874. (466)
The influence of chemical exhalations on agriculture. Gardeners' Chron. 1: 274-275.
- Cameron, F. K. and J. F. Breazeale. 1904. (467)
The toxic action of acids and salts on seedlings. Jour. Phys. Chem. 8: 1-13.
- Camp, A. F. 1927. (468)
Splitting of oranges. Fla. Agr. Exp. Sta. Ann. Rept. 50-52.
- Campanile, G. 1924. (469)
Ricerche sopra le condizioni di attacco e di sviluppo di Helminthosporium allii su Aglio. Staz. Sper. Agr. Ital. 57: 413-428.

- _____. 1926. (470)
Sulle septoriosi del Sedano. Boll. R. Staz. Pat. Veg. 6: 44-71.
- Campanini, L. 1926. (471)
Un nuovo parrassita del frumento? Coltivatore 72: 146-148.
- Campbell, A. G. 1905. (472)
Constitutional diseases of fruit trees. Jour. Dept. Agr. Victoria 3: 463-465.
- Cannon, W. A. 1921. (473)
Root-growth in relation to a deficiency of oxygen or an excess of carbon dioxide in the soil. Carnegie Inst., Washington, Yrbk. 20: 48-51.
- _____. 1923. (474)
The influence of the temperature of the soil on the relation of roots to oxygen. Science 58: 331-332.
- _____. 1924. (475)
A note on the relation of root growth in the soil to the oxygen supply: The growth ratio. Ecology 5: 319-321.
- _____. 1925. (476)
On the upper critical concentration of oxygen in root growth. Science 61: 118-120.
- _____. and E. E. Free. 1917. (477)
The ecological significance of soil aeration. Science 45: 178-180.
- _____. and _____. 1925. (478)
Physiological features of roots, with especial reference to the relation of roots to aeration of the soil. Carnegie Inst., Washington, Publ. 368: 1-168.
- Capus, J. 1915. (479)
Des avertissements contre le mildiou. Rev. Vitic. 42: 461-463.
- _____. 1916. (480)
L'évolution et le traitement du mildiou. Compt. Rend. Acad. Agr. France 2: 619-621 (Abst.).
- _____. 1917. (481)
Instruction pratique sur le traitement du mildiou dans le Sud-Ouest. Prog. Agr. et Vitic. 38: 444-445.
- _____. 1918. (482)
Note sur le développement de quelques maladies des plantes pendant le sécheresse. Bull. Soc. Path. Végét. France 5: 94-96 and Rev. Vitic. 49: 82-83.
- _____. 1919. (483)
Action des gaz de poudrerie sur les végétaux. Bull. Soc. Path. Végét. France 6: 85-88.
- _____. 1924. (484)
La sécheresse et la vigne. Rev. Vitic. 60: 54.
- Card, F. W. 1895. (485)
Apple-scab in Nebraska. Garden and Forest 8: 28.
- Cardiff, I. D. 1915. (486)
Winter desiccation of fruit trees. Wash. Agr. Exp. Sta. Ann. Rept. 25, 38-39.
- Carleton, M. A. 1893. (487)
Studies on the biology of the Uredineae. I. Notes on germination. Bot. Gaz. 18: 446-456.
- _____. 1905. (488)
Lessons from the grain rust epidemic of 1904. U. S. Dept. Agr., Farmers' Bull. 219, 1-24.
- Carne, W. M. 1924. (489)
Citrus diseases. Brown rot and leaf blight. Jour. Dept. Agr. W. Aust. 1: 519-522.
- _____. 1924-25. (490)
A preliminary census of the plant diseases of southwest Australia. Jour. Roy. Soc. W. Aust. 11: 43-68.
- _____. 1925. (491)
A brown rot of citrus in Australia (*Phytophthora hibernalis* n. sp.). Jour. Roy. Soc. W. Aust. 12: 13-41.
- _____. 1925. (492)
Cracking and russetting of Dunn's and other apples. Jour. Dept. Agr. W. Aust. 2: 214.
- _____. 1926. (493)
Black spot or blossom-end rot of tomatoes. Jour. Dept. Agr. W. Aust. 3: 21-22.
- _____. 1926. (494)
Exanthema (A die-back of orange trees). Jour. Dept. Agr. W. Aust. 3: 59-62.
- _____. 1927. (494a)
A preliminary note on a theory as to the origin of bitter pit in apples. Jour. Dept. Agr. W. Aust. 4: 382-385.

- _____. 1927. (495)
Grey speck disease of wheat and oats (known as white wilt in Western Australia).
Jour. Dept. Agr. W. Aust. 4: 515-519.
- _____. 1928. (496)
Crinkle of oranges. Jour. Dept. Agr. W. Aust. 5: 292-293.
- _____, H. A. Pittman, and H. G. Elliott. 1929. (497)
Studies concerning the so-called bitter-pit of apples in Australia; with special reference
to the variety Cleopatra. Australia Council Sci. and Indus. Res. Bull. 41, 1-88.
- _____, _____, and _____. 1930. (498)
Notes on wastage of non-parasitic origin in stored apples. Jour. Aust. Council Sci. and
Indus. Res. 3: 167-182.
- Carpenter, C. W. 1915. (498a)
Some potato tuber-rots caused by species of *Fusarium*. Jour. Agr. Res. 5: 183-209.
- _____. 1928. (499)
Conditions favoring *Pythium* development. Hawaiian Planters' Rec. 32: 394.
- _____. 1928. (500)
Notes on *Pythium* root rot. Hawaiian Planters' Rec. 32: 461-474.
- Carr, R. H. 1919. (501)
Vegetative growth in soils containing crude petroleum. Soil Sci. 8: 67-68.
- _____. and P. H. Brewer. 1923. (502)
Manganese, aluminum, and iron ratio as related to soil toxicity. Jour. Ind. and Engin.
Chem. 15: 634-637.
- _____. and H. G. Haverkamp. 1924. (503)
Modifications of plant growth and ash content as affected by acids added to soils. Jour.
Amer. Soc. Agron. 16: 278-283.
- Carrick, D. B. 1927. (504)
Storage scald of apples. Proc. N. Y. State Hort. Assoc., 152-155.
- Carsner, E. 1918. (505)
Angular-leafspot of cucumbers: dissemination, overwintering and control. Jour. Agr.
Res. 15: 201-220.
- _____. 1926. (506)
Seasonal and regional variations in curly-top of sugar beets. Science 63: 213-214.
- _____. and C. F. Stahl. 1924. (507)
Studies on curly-top disease of the sugar beet. Jour. Agr. Res. 28: 297-319.
- Carter, C. N. 1915. (508)
A powdery mildew on citrus. Phytopath. 5: 193-196.
- Carter, W. 1927. (509)
Ecological studies of curly-top of sugar beets. Phytopath. 17: 747. (Abst.).
- _____. 1929. (510)
Ecological studies of curly top of sugar beets. Phytopath. 19: 467-477.
- Cartwright, K. 1926. (511)
On the nature of the resistance of the potato to wart disease. Ann. Bot. 40: 391-395.
- _____. 1930. (512)
A decay of Sitka spruce timber, caused by *Trametes serialis* Fr. A cultural study of
the fungus. Dept. Sci. and Indus. Res., U. S. Forest Products Lab., Res. Bull. 4, 1-26.
- Caspar, R. 1926. (513)
Ueber den Einfluss äusserer Faktoren auf den Steinbrandbefall des Weizens. Kuhn
Arch. 12: 205-256.
- Castella, F. de and C. C. Brittebank. 1917. (514)
Notes on downy mildew (*Plasmopora viticola*). Jour. Dept. Agr. Victoria 15: 685-700.
- Castle, R. L. 1898 and 1899. (515)
Chlorosis in fruit trees. Gardeners' Chron. 25: 405 and 26: 4.
- Catalano, G. 1929. (516)
La concentrazione degli H-ioni nella patologia vegetale. Boll. Studi e. Infor. R. Giard
Colon., Palermo, 10: 13-43.
- Catlin, C. N. 1919. (517)
Cotton tolerance to alkali in the field. Ariz. Agr. Exp. Sta. Ann. Rept. 30, 408-409.
- Cauthen, E. F. 1916. (518)
Wilt resistant varieties of cotton. Ala. Agr. Exp. Sta. Bull. 189, 67-88.
- Cavadas, D. S. 1924. (519)
Le wildfire dans les plantations de Tabac de Thrace et de Macédoine. Rev. Path. Vég. et
Ent. Agric. 11: 236-242.
- Cayley, D. M. 1917. (520)

- Bacterial disease of *Pisum sativum*. Jour. Agr. Sci. 8: 461-479. (521)
- Cazeaux-Cazalet, G. 1898. (521)
- Le black rot: Ses rapports avec la température et la végétation de la vigne traitements opportuns. Rev. Vitic. 8: 173-233, 201-208, 229-233.
- Cercolet, M. 1906. (522)
- La chlorose et son traitement. Rev. Vitic. 26: 493-495.
- Chambers, W. H. 1925. (523)
- The growth, hydrogen-ion concentration, sugar fermentation, and surface tension of cultures of *Pseudomonas tumefaciens* and *Pseudomonas campestris*. Jour. Cancer Res. 9: 254-278.
- Chandler, W. H. 1913. (524)
- The killing of plant tissue by low temperature. Mo. Agr. Exp. Sta. Res. Bull. 8, 141-309.
- _____. 1915. (525)
- Some peculiar forms of winter injury in New York State during the winter of 1914-15. Proc. Amer. Soc. Hort. Sci. 12: 118-121.
- _____. 1918. (526)
- Winter injury in New York State during 1917-18. Proc. Amer. Soc. Hort. Sci. 15: 18-24.
- Chapman, G. H. 1908. (527)
- Investigations relating to mosaic disease. Mass. Agr. Exp. Sta. Ann. Rept. 20, 136-150.
- _____. 1911. (528)
- Abnormalities of stump growths. Mass. Agr. Exp. Sta. Ann. Rept. 23 (1), 149-160.
- _____. 1916. (529)
- Effect of colored light on the mosaic disease of tobacco. Science 43: 537-538.
- _____. 1917. (530)
- Mosaic disease of tobacco. Mass. Agr. Exp. Sta. Bull. 175, 73-117.
- Chappaz, G. 1924. (531)
- Le court-noué. Prog. Agr. et Vitic. 81: 469-474.
- Chardón, C. E. and R. A. Toro. 1927. (532)
- Plant disease notes from the central Andes. Phytopath. 17: 147-153.
- Chatin, A. 1845. (533)
- Études de physiologie végétale faites au moyen de l'acide arsénieux. Compt. Rend. Acad. Sci. (Paris) 20: 21-29.
- Chaudhuri, H. 1923. (534)
- A study of the growth in culture of *Verticillium albo-atrum* B. et Br. Ann. Bot. 37: 519-539.
- _____. 1924. (535)
- A description of *Colletotrichum biologicum*, nov. sp., and observations on the occurrence of a saltation in the species. Ann. Bot. 38: 735-744.
- Cheema, G. S. and S. S. Bhat. 1929. (536)
- The die-back disease of citrus trees and its relation to the soils of Western India (with examples of successful preventive and remedial treatment). Bombay Dept. Agr. Bull. 55 (1928), 1-48.
- Chester, F. D. 1902. (537)
- Sundry notes on plant diseases. Del. Agr. Exp. Sta. Bull. 57, 1-16.
- Chih, T. 1930. (538)
- Physiologic specialization in *Fusarium* spp. causing headblight of small grains. Minn. Agr. Exp. Sta. Tech. Bull. 74, 1-27.
- Childs, L. 1917. (539)
- New facts regarding the period of ascospore discharge of the apple-scab fungus. Ore. Agr. Exp. Sta. Bull. 143, 1-11.
- Chivers, A. H. 1917. (540)
- The injurious effects of tarvia fumes on vegetation. Phytopath. 7: 32-36.
- _____. 1929. (541)
- A comparative study of *Sclerotinia minor* Jagger and *Sclerotinia intermedia* Ramsey in culture. Phytopath. 19: 301-309.
- Chodat, F. 1924. (542)
- La concentration en ions hydrogène du sol et son importance pour la constitution des formations végétales. Diss. Genève.
- Christ, H. 1911. (543)
- Die Vegetation unter dem Einfluss des trockenen Sommers 1911 nördlichen Jura. Ber Schweiz. Bot. Gesell. 20: 254-258.
- Christensen, J. J. 1926. (544)
- Physiologic specialization and parasitism of *Helminthosporium sativum*. Minn. Agr. Exp. Sta. Tech. Bull. 37, 1-101.

- _____. 1926. (545)
The relation of soil temperature and soil moisture to the development of head smut of sorghum. *Phytopath.* 16: 353-357.
- Christoff, A. 1930. (546)
The Pleospora disease of cultivated poppy. (Russian, English summary). Gov't Printing Office, Sofia.
- Christopher, W. N. and C. W. Edgerton. 1930. (547)
Bacterial stripe diseases of sugarcane in Louisiana. *Jour. Agr. Res.* 41: 259-267.
- Chuard, E. and F. Porchet. 1902. (548)
L'action des sels de cuivre sur le végétaux. *Arch. Sci. Phys. Genève* 14: 502-505.
- Chupp, C. 1917. (549)
Studies on clubroot of cruciferous plants. N. Y. (Cornell) *Agr. Exp. Sta. Bull.* 387, 509-544.
- _____. 1925. (550)
Manual of vegetable-garden diseases. New York.
- _____. 1928. (551)
Club root in relation to soil alkalinity. *Phytopath.* 18: 301-306.
- _____. 1930. (552)
The effects of potash and phosphorus on tip burn and mildew of cabbage. *Phytopath.* 20: 307-318.
- Ciferri, R. 1922. (553)
La chlorosi della vite. *Rev. Agr., Parma*, 27: 321-323.
- _____. 1928. (554)
Preliminary observations on sugar cane mycorrhizae and their relationship to root diseases. *Phytopath.* 18: 249-261.
- Clara, F. M. 1928. (555)
A Phytophthora disease of santol seedlings. *Philippine Jour. Sci.* 35 (4): 411-427.
- _____. 1930. (556)
A new bacterial leaf disease of tobacco in the Philippines. *Phytopath.* 20: 691-706.
- Clark, J. F. 1899. (557)
Electrolytic dissociation and its toxic effect. *Jour. Phys. Chem.* 3: 263-316.
- _____. 1899. (558)
On the toxic effects of deleterious agents on the germination and development of certain filamentous fungi. *Bot. Gaz.* 28: 378-404.
- _____. 1902. (559)
On the toxic properties of some copper compounds with special reference to Bordeaux mixture. *Bot. Gaz.* 33: 26-48.
- Clausen. 1904. (560)
Resultate von Obstbaum-düngungen. *Landw. Jahrb.* 33: 939-960.
- _____. 1925. (561)
Haferkrankheiten nichtparasitärer Natur. *Illus. Landw. Zeit.* 45: 143.
- _____. 1930. (562)
Reaktionen des Hafers auf die Säuregrade im Boden. *Deutsche Landw. Presse* 57: 506.
- Clausen, H. 1910. (563)
Die Dörrfleckenkrankheit des Hafers. *Mitt. Deut. Landw. Ges.* 25: 631-639.
- Claussen, P. 1913. (564)
Über die Wirkung des Teers, insbesondere geteeter Strassen auf den Pflanzenwuchs. *Arb. K. Biol. Anst. Land- u. Forstw.* 8: 493-514.
- Clayton, E. E. 1920. (565)
The relation of soil temperature to the development of the tomato Fusarium wilt. *Phytopath.* 10: 63-64. (Abst.).
- _____. 1921. (566)
Weather conditions in relation to the development of plant disease epidemics. *Ohio State Hort. Soc. Ann. Rept.* 54, 44-45.
- _____. 1922. (567)
Diplodia zeae as an ear and root parasite of corn. *Phytopath.* 12: 29. (Abst.).
- _____. 1923. (568)
The relation of temperature to the Fusarium wilt of the tomato. *Amer. Jour. Bot.* 10: 71-88.
- _____. 1923. (569)
The relation of soil moisture to the Fusarium wilt of the tomato. *Amer. Jour. Bot.* 10: 133-147.

- _____. 1927. (570)
Black-leg disease of brussels sprouts, cabbage and cauliflower. N. Y. (Geneva) Agr. Exp. Sta. Bull. 550, 1-27.
- _____. 1927. (571)
Diplodia ear-rot diseases of corn. Jour. Agr. Res. 34: 357-371.
- _____. 1928. (572)
Seed treatment for black-leg disease of crucifers. N. Y. (Geneva) Agr. Exp. Sta. Tech. Bull. 137, 1-58.
- _____. 1929. (573)
Studies of the black-rot or blight disease of cauliflower. N. Y. (Geneva) Agr. Exp. Sta. Bull. 576, 1-44.
- _____. 1930. (574)
A study of the mosaic disease of crucifers. Jour. Agr. Res. 40: 263-270.
- Clement, F. M. 1913. (575)
Winter injury in orchards. Quebec Soc. Prot. Plants Ann. Rept. 5, 24-26.
- Clements, F. E. 1920. (576)
Plant indicators: The relation of plant communities to process and practice. Carnegie Inst. (Wash.) Publ. 290, 1-388.
- _____. 1921. (577)
Aeration and air-content; the rôle of oxygen in root activity. Carnegie Inst. (Wash.) Publ. 315, 1-183.
- Clevenger, J. F. 1913. (578)
The effect of the soot in smoke on vegetation. Mellon Inst. Indus. Res., Smoke Invest. Bull. 7.
- Clinton, G. P. 1900. (579)
The smuts of Illinois' agricultural plants. Ill. Agr. Exp. Sta. Bull. 57, 289-360.
- _____. 1904. (580)
Downy mildew, or blight, *Peronosplasmopara cubensis* (B. and C.) Clint., of muskmelons and cucumbers. Conn. Agr. Exp. Sta. Ann. Rept. 28, 329-362.
- _____. 1904. (581)
Downy mildew, or blight. *Phytophthora infestans* (Mont.) DeBy., of potatoes. Conn. Agr. Exp. Sta. Ann. Rept. 28, 363-384.
- _____. 1905. (582)
Report of the Botanist. Conn. Agr. Exp. Sta. Ann. Rept. 29, 263-330.
- _____. 1907-1908. (583)
Report of the Botanist for 1908. Conn. Agr. Exp. Sta. Ann. Rept. 31 and 32, 849-907.
- _____. 1914. (584)
Report of the Botanist for 1913. Conn. Agr. Exp. Sta. Ann. Rept. 38, Pt. I, 1-42.
- _____. 1914. (585)
Chlorosis of plants with special reference to calico of tobacco. Conn. Agr. Exp. Sta. Ann. Rept. 38, Pt. I, 357-424.
- _____. and W. E. Britton. 1911. (586)
Tests of summer sprays on apples, peaches, etc. Conn. Agr. Exp. Sta. Ann. Rept. 35, 347-406.
- _____. and F. A. McCormick. 1922. (587)
Wildfire of tobacco in Connecticut. Conn. Agr. Exp. Sta. Bull. 239, 365-423.
- Cobb, N. A. 1891. (588)
Water core in apples. Agr. Gaz. N. S. Wales 2: 286-287.
- _____. 1892. (589)
Contributions to an economic knowledge of the Australian rusts (*Uredineae*). Agr. Gaz. N. S. Wales 3: 44-68, 181-212.
- _____. 1896. (590)
The hot-air treatment of bunt or stinking smut of wheat. Agr. Gaz. N. S. Wales 7: 82-83.
- Codding, G. M. 1924. (591)
Frost cracks. Tree Talk 6 (1): 5-6.
- _____. 1924. (592)
Defoliation of shade trees due to heat. Tree Talk 6 (2): 25-26.
- Cooper, F. M. 1919. (593)
Bacterial blight of soybean. Jour. Agr. Res. 18: 179-193.
- Coffman, F. A., W. H. Tisdale, and J. F. Brandon. (594)
Observations on corn smut at Akron, Colorado. Jour. Amer. Soc. Agron. 18: 403-411.
- Coit, J. E. and R. W. Hodgson. 1916. (595)
The cause of June drop of navel oranges. Univ. Calif. Jour. Agr. 4: 8-10, 27-29.

- _____ and _____. 1918. (596)
The June drop of Washington navel oranges. Calif. Agr. Exp. Sta. Bull. 290, 203-212.
- _____ and _____. 1919. (597)
An investigation of the abnormal shedding of young fruits of the Washington navel orange. Univ. Calif. Publ. Agr. Sci. 3: 283-368.
- Coleman, D. A. 1916. (598)
Environmental factors influencing the activity of soil fungi. Soil Sci. 2: 1-65.
- Colley, R. H. and C. T. Rumbold. 1930. (599)
Relation between moisture content and blue stain in loblolly pine. Jour. Agr. Res. 41: 389-399.
- Collier, P. 1892. (599a)
Influence of copper compounds in soils upon vegetation. N. Y. (Geneva) Agr. Exp. Sta. Bull. 41, 35-58.
- Collings, G. H. 1927. (600)
The influence of boron on the growth of the soy bean plant. Soil Sci. 23: 83-105.
- Collins, J. L. 1927. (601)
A low temperature type of albinism in barley. Jour. Heredity 18: 331-334.
- Collison, S. E. 1919. (602)
Citrus fertilizer experiments. Fla. Agr. Exp. Sta. Bull. 154, 1-48.
- Colville, F. V. 1913. (603)
The agricultural utilization of acid lands by means of acid-tolerant crops. U. S. Dept. Agr., Dept. Bull. 6, 1-13.
- Comber, N. M. 1921. (604)
Relation of the hydrogen-ion concentration of the soil to plant distribution. Nature 108: 146-147.
- Comes, O. 1912. (605)
Della resistenza dei frumenti alle ruggini Stato attuale della questione e provvedimenti. Atti R. Ist. Incorragg., Napoli, 64: 418-441.
- _____. 1914. (606)
Della resistenza dei frumenti alle ruggini ed in generale delle piante alle loro cause Nemiche. Ann. R. Scuola Sup. Agr., Portici, 12: 419-473.
- _____. 1917. (608)
La Profilassi nella Patologia Vegetale. Atti. R. Ist. Incoragg., Napoli, 68: 1-173.
- Conant, G. H. 1927. (609)
Histological studies of resistance in tobacco to *Thielavia basicola*. Amer. Jour. Bot. 14: 457-480.
- Conner, S. D. 1913. (610)
Irish potato scab (*Oospora scabies*) as affected by fertilizers containing sulphates and chlorids. Proc. Ind. Acad. Sci. 29: 131-137.
- _____. 1916. (611)
Acid soils and the effect of acid phosphate and other fertilizers upon them. Jour. Ind. and Eng. Chem. 8: 35-40.
- _____. 1918. (612)
The injurious effect of borax in fertilizers on corn. Proc. Ind. Acad. Sci. 27: 195-199.
- _____. 1920. (613)
The effect of zinc in soil tests with zinc and galvanized iron pots. Jour. Amer. Soc. Agron. 12: 61-64.
- _____ and E. N. Fergus. 1920. (614)
Borax in fertilizers. Ind. Agr. Exp. Sta. Bull. 239, 1-15.
- _____ and O. T. Gregory. 1928. (615)
Excess soluble salts as the cause of vegetable diseases in greenhouses. Proc. Ind. Acad. Sci. 37: 385-390.
- _____ and O. H. Sears. 1922. (616)
Aluminum salts and acids at varying hydrogen-ion concentrations, in relation to plant growth in water cultures. Soil Sci. 13: 23-41.
- Conrad, H. S. 1901. (617)
Fasciation in the sweet potato. Contrib. Bot. Lab. Univ. Pa. 2: 205-215.
- Constantineau, J. C. 1906. (618)
Über die Entwicklungsbedingungen der Myxomyceten. Ann. Mycol. 4: 495-540.
- Contejean, C. 1875. (619)
Influence du calcaire sur la dispersion des plantes dites calcifuges. Compt. Rend. Acad. Sci. (Paris) 81: 51-52.
- Cook, F. C. 1916. (620)
Boron: Its absorption and distribution in plants and its effect on growth. Jour. Agr. Res. 5: 877-890.

- _____. 1921. (621)
The absorption of copper from the soil by potato plants. *Science* 54: 57.
- _____. and J. B. Wilson. 1917. (622)
Effect of three annual applications of boron on wheat. *Jour. Agr. Res.* 10: 591-597.
- _____. and _____. 1918. (623)
Boron: Its effect on crops and its distribution in plants and soil in different parts of the United States. *Jour. Agr. Res.* 13: 451-470.
- Cook, M. T. 1918. (624)
Common diseases of shade and ornamental trees. *N. J. Agr. Exp. Sta. Circ.* 98, 1-27.
- _____. 1920. (625)
Falling foliage. *N. J. Agr. Exp. Sta. Ann. Rept.* 41, 570-573.
- _____. 1921. (626)
Sunburn and tomato fruit rots. *Phytopath.* 11: 379-380.
- _____. 1925. (627)
Chlorosis de la Pina. *Rev. Agr. Porto Rico* 15: 296-297.
- _____. 1926. (628)
The eye-spot disease of sugar cane. *Jour. Dept. Agr. Porto Rico* 10: 207-227.
- _____. 1927. (629)
Studies on *Helminthosporium sacchari* on sugar cane in Porto Rico. *Phytopath.* 16: 71. (Abst.).
- _____. 1929. (630)
The eye spot disease of sugar cane. *Planter and Sugar Manufacturer* 83 (6): 101-102.
- _____. and J. J. Taubenhause. 1911. (631)
The relation of parasitic fungi to the contents of the cells of the host plants. (I. The toxicity of tannin.). *Del. Agr. Exp. Sta. Bull.* 91, 1-67.
- _____. and _____. 1912. (632)
The relation of parasitic fungi to the contents of the cells of the host plant. (II. The toxicity of vegetable acids and the oxidizing enzyme). *Del. Agr. Exp. Sta. Bull.* 97, 1-50.
- _____. and G. W. Wilson. 1915. (633)
The influence of the tannin content of the host plant on *Endothia parasitica* and related species. *Bot. Gaz.* 60: 346-361.
- Cook, S. A. 1929. (634)
Rind markings of citrus fruits. *Jour. Dept. Agr. Victoria* 27: 593-596.
- Cook, W. R. I. 1927. (635)
The influence of environment on the infection by *Ligniera juncei*. *Trans. Brit. Mycol. Soc.* 12: 282-290.
- Cooley, J. S. 1914. (636)
A study of the physiological relations of *Sclerotinia cinerea* (Bon.) Schröter. *Ann. Mo. Bot. Gard.* 1: 291-326.
- Coons, G. H. 1912. (637)
Some investigations of the cedar rust fungus, *Gymnosporangium juniperi-virginianae*. *Nebr. Agr. Exp. Sta. Ann. Rept.* 25, 215-245.
- _____. 1916. (638)
Factors involved in the growth and the pycnidium formation of *Plenodomus fuscomaculans*. *Jour. Agr. Res.* 5: 713-769.
- _____. 1917. (639)
Relation of weather to epidemics of late blight of potato. *Mich. State Bd. Agr.*, 317-318.
- _____. 1921. (640)
Potato scab and type of soil. *Mich. Agr. Exp. Sta. Quart. Bull.* 3: 132-134.
- _____. 1924. (641)
Black root of strawberry. *Mich. Agr. Exp. Sta. Quart. Bull.* 7: 25-26.
- _____. 1924. (642)
Root diseases of the sugar beet. *Facts about Sugar* 18: 251-253.
- _____. and J. E. Kotila. 1923. (643)
Michigan potato diseases. *Mich. Agr. Exp. Sta. Spec. Bull.* 125, 1-55.
- _____. and E. Levin. 1920. (644)
The relation of light to pycnidium formation in the *Sphaeropsidales*. *Rept. Mich. Acad. Sci.* 22: 209-213.
- _____. D. Stewart, and F. C. Larmer. 1930. (645)
The sugar-beet leaf-spot disease and its control by direct measures. *U. S. Dept. Agr. Circ.* 115, 1-20.
- Cooper, D. C. and C. L. Porter. 1928. (646)
Phytophthora blight of peony. *Phytopath.* 18: 881-899.

- Copeland, E. B. and L. Kahlenberg. 1900. (647)
The influence of the presence of pure metals upon plants. Trans. Wis. Acad. Sci. 12: 454-474.
- Corbett, W. 1927. (648)
A wilt disease of the carnation. Gardeners' Chron. 81: 150.
- Cordley, A. B. 1900. (649)
Apple-tree anthracnose, a new fungus disease. Ore. Agr. Exp. Sta. Bull. 60, 1-8.
- Costa, T. 1928. (650)
Contributo allo studio della "Cercospora beticola" (Sacc.) nella bassa vallata Padana. Nuovo Giorn. Bot. Ital. 35: 25-27.
- Costantin, J. 1925. (651)
Un essai sur les pommes de terre montagnardes. Compt. Rend. Acad. Sci. (Paris) 181: 633-636.
- _____. 1927. (652)
La cure d'altitude, son emploi et son efficacité en pathologie végétale. Essai d'une théorie de ce phénomène. Ann. Sci. Nat. Bot. 9: 299-369.
- _____. 1927. (653)
Importance économique et agricole des cultures montagnardes tropicales. Compt. Rend. Acad. Sci. (Paris) 184: 1385-1388.
- _____. 1928. (654)
Notes de pathologie alpestre. Compt. Rend. Acad. Sci. (Paris) 186: 1776-1778.
- Coste-Floret, P. 1896. (655)
Rôle du sulphate de fer. Prog. Agr. et Vitic. 26: 434-440, 463-467, 496-504.
- _____. 1898. (656)
Influence des engrais sur les maladies et accidents de végétation de la vigne. Prog. Agr. et Vitic. 29: 300-308, 363-372.
- Cotner, F. B. 1930. (657)
The development of the zoospores in the Oömycetes at optimum temperatures and the cytology of their active stages. Amer. Jour. Bot. 17: 511-546.
- Cotter, R. U. 1930. (658)
Factors affecting the development of the aecial stage of Puccinia graminis. Phytopath. 20: 139. (Abst.).
- Cotton, A. D. 1922. (659)
The situation with regard to leaf-curl and mosaic in Britain. Roy. Hort. Soc., London (Intern. Potato Conf. Rept.) 1921, 153-168.
- _____. 1922. (660)
Report on the occurrence of fungus, bacterial, and allied diseases on crops in England and Wales for the years 1920-1921. Min. Agr. and Fisheries, London, Misc. Publ. 38, 1-104.
- Coulson, T. J. 1922. (661)
Winter injury of trees. Jour. Agr. Quebec 26 (5): 63.
- Coupin, H. 1898. (662)
Sur la toxicité des sels de cuivre à l'égard des végétaux supérieurs. Compt. Rend. Acad. Sci. (Paris) 127: 400-401.
- _____. 1900. (663)
Sur la toxicité du chlorure de sodium et de l'eau de mer à l'égard des végétaux. Rev. Gén. Bot. 12: 177-193.
- _____. 1901. (664)
Contribution à l'étude des substances toxiques pour les plantes. Compt. Rend. Assoc. Franç. Sci. 30 (2): 414-415.
- _____. 1901. (665)
Sur la sensibilité des végétaux supérieurs à des doses très faibles de substances toxiques. Compt. Rend. Acad. Sci. (Paris) 132: 645-647.
- _____. 1920. (666)
Sur la nocivité de quelques composés du magnésium à l'égard de diverses plantes. Rev. Gén. Bot. 32: 19-43, 78-90.
- Coville, F. V. 1911. (667)
The blueberry and its relation to acid soils. Science 33: 903-904.
- _____. 1923. (668)
The effect of aluminum sulphate on Rhododendron seedlings. Amer. Hort. Soc. Bull. 1, 6.
- Cox, H. J. 1910. (669)
Frost and temperature conditions in the cranberry marshes of Wisconsin. U. S. Dept. Agr., Weather Bur. Bull. T.

- Crabill, C. H. 1913. (670)
 Production of secondary sporidia by Gymnosporangium. *Phytopath.* 3: 282-284.
- _____. 1915. (671)
 The frog-eye leaf spot of apples. *Va. Agr. Exp. Sta. Bull.* 209, 1-16.
- Craig, J. 1896. (672)
 Root killing of fruit trees. *Canada Exp. Farms Rept.*, 147-151.
- _____. 1896. (673)
 Relative hardness of fruit buds of peaches and plums. *Canada Exp. Farms Rept.*, 153-158.
- _____. 1900. (674)
 Observations and suggestions on the root-killing of fruit trees. *Iowa Agr. Exp. Sta. Bull.* 44, 177-213.
- Cramer, P. J. S. 1910. (675)
 The coffee plantations of Tonkin. *Philippine Agr. Rev.* 3: 94-100.
- Crandall, C. S. 1898. (676)
 Blight of apple and pear trees. *Colo. Agr. Exp. Sta. Bull.* 41, 1-14.
- _____. 1909. (677)
 Bordeaux mixture. *Ill. Agr. Exp. Sta. Bull.* 135, 199-296.
- Creydt, B. 1915. (678)
 Untersuchungen über die Kalkempfindlichkeit der Lupine und ihre Bekämpfung. *Jour. Landw.* 63: 125-191.
- Cristiani, H. and J. Stoklasa. 1927. (679)
 The loss to agriculture caused by factory fumes. *Inter. Inst. Agr., Rome*, 1-26.
- Crocker, W. and L. I. Knight. 1908. (680)
 Effect of illuminating gas and ethylene upon flowering carnations. *Bot. Gaz.* 46: 259-276.
- Cromie, G. A. 1914. (681)
 An unusual case of electrical injury to street trees. *Sci. Amer. Sup.* 77 (1985): 36-37.
- Cromwell, R. O. 1919. (682)
 Fusarium blight of the soy bean and the relation of various factors to infection. *Nebr. Agr. Exp. Sta. Res. Bull.* 14, 1-43.
- _____. 1920. (683)
 Recent studies on Septoria of wheat. *Phytopath.* 10: 51. (Abst.).
- Crowther, C. and A. G. Ruston. 1911. (684)
 The nature, distribution and effects upon vegetation of atmospheric impurities in and near an industrial town. *Jour. Agr. Sci.* 4: 25-55.
- _____. and _____. 1915. (685)
 The plant as an index of smoke-pollution. *Brit. Assoc. Adv. Sci. Rept.* 85: 780. (Abst.).
- _____. and D. W. Steuart. 1913. (686)
 The distribution of atmospheric impurities in the neighborhood of an industrial city. *Jour. Agr. Sci.* 5: 391-408.
- _____. and _____. 1914. (687)
 Further studies of the effects of smoke from towns upon vegetation in the surrounding areas. *Jour. Agr. Sci.* 6: 395-405.
- Crowther, E. M., M. D. Glynne, and W. A. Roach. 1927. (688)
 Sulfur treatment of soil and the control of wart disease of potatoes in pot experiments. *Ann. Appl. Biol.* 14: 422-427.
- Crüger. 1923. (689)
 Beobachtungen zur sogenannten "Bodensäurekrankheit". *Mitt. Deut. Landw. Ges.* 38: 553-555.
- Crüger, O. 1929. (690)
 Fusskrankheit an Weizen, Roggen und Gerste. *Angew. Bot.* 11: 1-24.
- Cummings, M. B. and E. W. Jenkins. 1925. (691)
 Hubbard squash in storage (climate of storage rooms and changes in composition). *Vt. Agr. Exp. Sta. Bull.* 251, 1-35.
- Cunningham, G. H. 1920. (692)
 Mortality among stone-fruit trees in central Otago. *Jour. Agr. New Zeal.* 20: 359-364.
- _____. 1927. (693)
 Dry rot of swedes and turnips; its cause and control. *Dept. Agr. New Zealand Bull.* 133, 1-51.
- Curtel, G. 1900. (694)
 Recherches expérimentales sur les phénomènes physiologiques accompagnant la chlorose chez la Vigne. *Compt. Rend. Acad. Sci. (Paris)* 130: 1074-1076.

- Curtis, K. M. 1921. (695)
The life-history and cytology of *Synchytrium endobioticum* (Schilb.) Perc., the cause of wart disease in potato. Phil. Trans. Roy. Soc., London, 210B: 409-478.
- Curzi, M. 1929. (696)
Su una "pseudocarie" delle cariossidi di Frumeto. Atti. Ist. Bot. R. Univ. di. Pavia, Ser. 4, 1: 151-155.
- Dade, H. A. 1927. (697)
"Collar crack" of cacao *Armillaria mellea* (Vahl.) Fr. Gold Coast Dept. Agr. Bull. 5, 1-21.
- _____. 1927. (698)
Economic significance of cacao pod diseases and factors determining their incidence and control. Gold Coast Dept. Agr. Bull. 6, 1-59.
- Daingerfield, L. H. 1908. (699)
Damage by frost at Middlebranch, Ohio. U. S. Dept. Agr., Mo. Weather Rev. 36: 173-174.
- Dale, E. 1901. (700)
Investigations on the abnormal growths of intumescences on *Hibiscus ventifolius* Linn. Trans. Roy. Phil. Soc., London, 194B: 163-182.
- _____. 1912. (701)
A bacterial disease of potato leaves. Ann. Bot. 26: 133-154.
- Daly, P. M. 1925. (702)
A preliminary report on Jonathan breakdown. Sci. Agr. 5: 155-165.
- Dana, B. F. 1925. (703)
The Rhizoctonia disease of potatoes. Wash. Agr. Exp. Sta. Bull. 191, 1-78.
- Darnell-Smith, G. P. 1914. (704)
Plant diseases in New South Wales, 1913-14. Dept. Agr. N. S. Wales Rept., 32-33.
- _____. 1914. (705)
Black spot of the tomato. Agr. Gaz. N. S. Wales 25: 1069-1070.
- _____. and E. MacKinnon. 1914. (706)
Fungus and other diseases of citrus trees. Agr. Gaz. N. S. Wales 25: 945-954.
- _____. and _____. 1914 and 1915. (707)
Fungus and other diseases of apple trees. Agr. Gaz. N. S. Wales 25: 1037-1044 and 26: 51-57, 105-113.
- Dastur, J. F. 1917. (708)
Conditions influencing the distribution of potato blight in India. Agr. Jour. India (Sci. Cong. No.), 90-96.
- _____. 1921. (709)
Die-back of Chillies (*Capsicum* spp.) in Bihar. Mem. Dept. Agr. India, Bot. Ser. 9 (5): 127-144.
- Dauthenay, H. 1901. (710)
Sur la chlorose des arbres fruitiers en terrain calcaire. Rev. Hort. 73: 50-51.
- David. 1897. (711)
Nebel und Erdausdünstungen und ihr Einfluss auf ägyptische Baumwolle. Zeitschr. Pflanzenkr. 7: 143-149.
- Davies, R. 1928. (712)
Fruit storage investigations. I. Storage investigations of pineapples in South Africa. So. Africa Dept. Agr. Sci. Bull. 71, 1-27.
- Davis, G. C. 1893. (713)
Celery insects. Mich. Agr. Exp. Sta. Bull. 102, 1-52.
- Davis, R. J. 1925. (714)
Studies on *Ophiobolus graminis* Sacc. and the take-all disease of wheat. Jour. Agr. Res. 31: 801-825.
- Davis, W. A. 1918. (715)
A study of the indigo soils of Bihar. Indigo Publ. Agr. Res. Inst. Pusa 1: 1-75.
- Davis, W. B. 1926. (716)
Physiological investigation of black heart of potato tuber. Bot. Gaz. 81: 323-338.
- Davis, W. H. 1923. (717)
Germination of the spores of timothy smut, *Ustilago striaeformis* (Westd.). Phytopath. 13: 38-39. (Abst.).
- _____. 1924. (718)
Spore germination of *Ustilago striaeformis*. Phytopath. 14: 251-266.
- Dawson, W. J. 1929. (719)
On the stem rot or wilt disease of carnations. Ann. Appl. Biol. 16: 261-280.

- Day, D. 1928. (720)
Some effects on *Pisum sativum* of a lack of calcium in the nutrient solution. *Science* 68: 426-427.
- _____. 1929. (721)
Some effects of calcium deficiency on *Pisum sativum*. *Plant Physiol.* 4: 493-506.
- Day, P. C. 1911. (722)
The drought of 1910 in the principal spring-wheat growing states. *U. S. Dept. Agr., Mo. Weather Rev.* 39: 142-143.
- _____. 1927. (723)
Drought and its effects in the United States. *U. S. Dept. Agr. Yrbk.*, 1926, 314-316.
- Day, W. H. 1928. (724)
Frost as a cause of disease in trees. *Quart. Jour. Forestry* 22: 179-191.
- Day, W. R. 1927. (725)
The parasitism of *Armillaria mellea* in relation to conifers. *Quart. Jour. Forestry* 21: 9-21.
- _____. 1928. (726)
Damage by late frost on Douglas Fir, Sitka Spruce, and other conifers. *Forestry* 2: 19-30.
- _____. 1929. (727)
Environment and disease. A discussion on the parasitism of *Armillaria mellea* (Vahl.) Fr. *Forestry* 3: 94-103.
- Dearness, J. B. and G. B. Sanford. 1930. (728)
A new species of *Plenodomus*. *Ann. Mycol.* 28: 325-326.
- Deatrick, E. P. 1919. (729)
The effect of manganese compounds on soils and plants. *N. Y. (Cornell) Agr. Exp. Sta. Mem.* 19, 359-402.
- Deckenbach, K. N. 1927. (730)
Experiments in the control of the powdery mildews of the Fuller's Teasel and of Cucurbitaceae by means of lime-sulphur and some other substances (Russian). *Morbi Plantarum, Leningrad*, 16: 172-175.
- DeGroene, F. 1930. (730a)
Verschil in toename in het percentage mozaikziekte bij eigenheimers, verbouwd op zware klei en lichte zavelgrond. *Tijdschr. Plantenziekten* 36: 13-16.
- Delacroix, G. 1897. (731)
La "maladie des Châtaigniers" en France. *Bull. Soc. Mycol. France* 13: 242-252.
- _____. 1908. (732)
Maladies non-parasitaires des plantes cultivées. Paris.
- Delong, G. E. 1929. (733)
The effect of cutting garnet wheat at different stages of maturity and on consecutive dates after the occurrence of frost. *Sci. Agr.* 9: 566-574.
- Demaree, J. B. 1927. (734)
Sand burn of pecan seedlings. *Phytopath.* 17: 657-661.
- _____. and J. R. Cole. 1930. (735)
Pecan leaf blotch. *Jour. Agr. Res.* 40: 777-789.
- Dementjew, A. 1903. (736)
Die Chlorose der Pflanzen und Mittel zu ihrer Bekämpfung. *Zeitschr. Pflanzenkr.* 13: 321-338.
- _____. 1904. (737)
La chlorose des plantes et les moyens de la combattre. *Ann. Sci. Agr.* 2: 63-81.
- Dengler, A. 1910. (738)
Junifrostschäden an der Kiefer. *Zeitschr. Forst. u. Jagdw.* 42: 670-674.
- DeOng, E. R. 1927. (739)
Petroleum oil sprays for the orchard. *Fruits and Gardens* 25 (1): 7.
- DeOng, E. L., H. Knight, and J. C. Chamberlin. 1927. (740)
A preliminary study of petroleum oil as an insecticide for citrus trees. *Hilgardia* 2: 351-384.
- Detjen, L. R. 1926. (741)
Physiological dropping of fruits. *Del. Agr. Exp. Sta. Bull.* 143, 1-36.
- _____. 1929. (742)
Frost injury to apple, plum, and peach. *Trans. Penin. Hort. Soc.* 18 (5): 23-29.
- _____. and G. F. Gray. 1928. (743)
Physiological drop of fruits in Delaware. *Del. Agr. Exp. Sta. Ann. Rept., Bull.* 158, 24-28.

- Detmer, W. 1882. (744)
 Ueber die Einwirkung verschiedener Gase, insbesondere des Stickstoffoxydulgases auf Pflanzenzellen. Landw. Jahrb. 11: 213-232.
- Diakonoff, H. 1910. (745)
 Stippigkeit der Apfel. Zeitschr. Pflanzenkr. 20: 482-483. (Abst.).
- Dickinson, L. S. 1930. (746)
 The effect of air temperature on the pathogenicity of *Rhizoctonia solani* parasitizing grasses on putting-green turf. Phytopath. 20: 597-608.
- Dickson, B. T. 1922. (747)
 Studies concerning mosaic diseases. MacDonald College, Quebec, Tech. Bull. 2, 1-125.
- _____. 1922. (748)
 Diseases of the potato. VIII. Physiological diseases. Sci. Agr. 2: 417-419.
- _____. 1923. (749)
 Temperature studies in mosaic diseases. Phytopath. 13: 42. (Abst.).
- _____. 1923. (750)
 Raspberry mosaic and curl. Sci. Agr. 3: 308-310.
- _____. 1928. (751)
 Leaf spot of banana in southern Queensland. Queensland Agr. Jour. 30: 455-457.
- _____. 1929. (752)
 Division of economic botany: Some present activities. Jour. Aust. Council and Indus. Res. 2: 94-97.
- Dickson, J. G. 1920. (753)
 The relation of soil temperature to *Fusarium* blight of wheat and corn. U. S. Dept. Agr., Cereal Courier 12: 105-106.
- _____. 1921. (754)
 The influence of soil temperature on the development of the seedling blight of cereals caused by *Gibberella saubinetii*. Phytopath. 11: 35-36. (Abst.).
- _____. 1922. (755)
 Wheat scab influenced by climate. Wis. Agr. Exp. Sta. Bull. 339, 32-36.
- _____. 1923. (756)
 The influence of soil temperature and moisture on the development of seedling blight of wheat and corn caused by *Gibberella saubinetii* (Mont.) Sacc. Phytopath. 13: 50. (Abst.).
- _____. 1923. (757)
 Influence of soil temperature and moisture on the development of the seedling-blight of wheat and corn caused by *Gibberella saubinetii*. Jour. Agr. Res. 23: 837-870.
- _____. 1924. (758)
 Studies on nature of disease resistance in cereals. Wis. Agr. Exp. Sta. Bull. 362, 43-45.
- _____. 1925. (759)
 The relation of plant physiology and chemistry to the study of disease resistance in plants. Jour. Amer. Soc. Agron. 17: 676-695.
- _____. 1926. (760)
 Making weather to order for the study of grain diseases. Wis. Agr. Exp. Sta. Bull. 379, 1-36.
- _____, S. H. Eckerson, and K. P. Link. 1923. (761)
 The nature of resistance to seedling blight of cereals. Proc. Nat. Acad. Sci. 9: 434-439.
- _____, and J. R. Holbert. 1926. (762)
 The influence of temperature upon the metabolism and expression of disease resistance in selfed lines of corn. Jour. Amer. Soc. Agron. 18: 314-322.
- _____, and _____. 1928. (763)
 The relation of temperature to the development of disease in plants. Amer. Nat. 62: 311-333.
- _____, et al. 1929. (764)
 The influence of environment upon predisposition to seedling blight in wheat and corn strains. Phytopath. 29: 79. (Abst.).
- Diels, L. 1929. (765)
 Die Frostscha den in den botanischen Garten Deutschlands im Winter 1928/29. Ber. Deutsch. Bot. Ges. 47: 603-607.
- Dietel, P. 1912-1921. (766)
 Versuche über die Keimungsbedingungen der Teleutosporen einiger Uredineen. I, II, III, and IV. Centbl. Bakt. 31: 95-106, 1912; 35: 272-285, 1912; 42: 698-705, 1915; 54: 215-219, 1921.
- Dillon-Weston, W. A. R. 1927. (767)
 A note on the "bud-rot" of apple trees. Brit. Mycol. Soc. Trans. 12: 170-172.

- Dingerkus, R. 1926. (768)
Der Wind als Krankheitsfaktor und Gefahrenquelle im Walde. *Illus. Landw. Zeit.* 46 (4): 46-48.
- Dobson, W. H. 1916. (769)
Leaf-spot on vines. *Gardeners' Chron.* 59: 267.
- Dodge, A. W. 1924. (770)
Storm damaged trees. *Tree Talk* 5 (4): 7-10.
- Doe, F. 1916. (771)
Asphyxiating gas and vegetation. *Forest Quart.* 14: 748. (Abst.).
- Doerell, E. G. 1927. (772)
Betrachtungen zum Gelbrostproblem und zur Bekämpfung des Gelbrostes durch Düngung. *Ernähr. Pflanze* 23: 49-52.
- _____. 1929. (773)
Lagerung und Reifeverzögerung bei Gerste durch Phosphorsäuremangel im Boden als Folge von Rauchschiiden. *Superphosphate* 2: 49-50.
- Doidge, E. M. 1915. (774)
A bacterial disease of the mango. *Bacillus mangiferae* n. sp. *Ann. Appl. Biol.* 2: 1-44.
- _____. 1915. (775)
The South African mulberry blight *Bacterium mori* (Boy. and Lamb.) Smith. *Ann. Appl. Biol.* 2: 118-124.
- _____. 1916. (776)
The origin and cause of citrus canker in South Africa. *Union So. Africa Dept. Agr. Sci. Bull.* 8, 1-20.
- _____. 1917. (777)
A bacterial spot of citrus. *Ann. Appl. Biol.* 3: 58-80.
- _____. 1917. (778)
A bacterial blight of pear blossoms occurring in South Africa. *Ann. Appl. Biol.* 4: 50-74.
- _____. 1921. (779)
A tomato canker. *Ann. Appl. Biol.* 7: 407-430.
- D'Oliveira, B. 1930. (780)
Podridão rósea do coração das Maçãs. *Rev. Agron.* 18: (3) 48-63, (4) 9-67.
- Dombrovski, N. 1909. (781)
Fungi as a cause of lodging of cereal crops. (Russian). *Russ. Jour. Exp. Landw.* 10: 558. (Abst.).
- Domontowitsch, M. K. 1924. (782)
Acidität der Nährlosung und Chlorose. *Jour. Landw. Wiss. Moskau* 1: 191-199.
- Doolittle, S. P. 1915. (783)
Cucumber scab caused by *Cladosporium cucumerinum*. *Mich. Acad. Sci. Rept.* 17: 87-116.
- _____. 1920. (784)
The mosaic disease of cucurbits. *U. S. Dept. Agr., Dept. Bull.* 879, 1-69.
- _____. 1921. (785)
Influence of temperature on the development of mosaic diseases. *Phytopath.* 11: 46-47. (Abst.).
- _____. and H. L. Blood. 1930. (786)
Investigations of tomato streak. *Phytopath.* 20: 134. (Abst.).
- Doran, W. L. 1919. (787)
The minimum, optimum and maximum temperatures of spore germination in some Uredinales. *Phytopath.* 9: 391-402.
- _____. 1921. (788)
Rust of *Antirrhinum*. *Mass. Agr. Exp. Sta. Bull.* 202, 37-66.
- _____. 1922. (789)
Effect of external and internal factors on the germination of fungus spores. *Bull. Torrey Bot. Club* 49: 318-340.
- _____. 1923. (790)
Toxicity studies with some copper fungicides. *Phytopath.* 13: 532-542.
- _____. 1925. (791)
Experiments on the control of apple scab and black rot and spray injury in 1924. *Mass. Agr. Exp. Sta. Bull.* 222, 1-10.
- _____. 1927. (792)
Relation of the adjustment of soil reaction to black root-rot of tobacco. *Science* 66: 661-662.

- _____. 1929. (793)
Effects of soil temperature and reaction on growth of tobacco infected and uninfected with black root rot. Jour. Agr. Res. 39: 853-872.
- _____. and E. F. Guba. 1928. (794)
Blight and leaf-spot of carrot in Massachusetts. Mass. Agr. Exp. Sta. Bull. 245, 271-278.
- Döring, E. 1927. (795)
Ursachen und Heilung der Chlorose. Blumen u. Pflanzenbau 42: 175-177.
- Dorogin, G. N. 1915. (796)
Effect of meteorological conditions on the development of plant diseases II. (Russian). Mat. Mikol. i Fitopatol. Ross. 1: (2) 1-9 and (4) 3-6.
- Dorsey, C. W. 1906. (797)
Alkali soils of the United States. U. S. Dept. Agr., Bur. Soils Bull. 35, 1-196.
- Dorsey, M. J. 1918. (798)
Russet ring on the apple. Minn. Horticulturist 46: 415-416.
- _____. and J. W. Bushnell. 1920. (799)
The hardiness problem. Proc. Amer. Soc. Hort. Sci. 17: 210-224.
- Dosdall, L. 1923. (800)
Factors influencing the pathogenicity of *Helminthosporium sativum*. Minn. Agr. Exp. Sta. Tech. Bull. 17, 1-47.
- Doty, R. E. 1930. (801)
Iron sulphate spray for coral chlorosis. Hawaiian Plant Rec. 34: 79-82.
- Douglas, H. F. K. 1916. (802)
Lodging in sugar cane, and its prevention. Arch. Suikerindus. Nederland, Indië, 24: 667-688.
- Ducomet, V. 1926. (804)
Le Rhizoctone violet et ses hôtes. Rev. Path. Vég. et Ent. Agr. 13: 33-38.
- _____. 1927. (805)
Les rouilles du blé au cours de la campagne 1925-1926. Rev. Path. Vég. et Ent. Agr. 14: 39-44.
- _____. and E. Foëx. 1924. (806)
Observations sur les rouilles des céréales. Jour. Agr. Prat. 88: 130-132.
- Dude, M. 1903. (807)
Über den Einfluss des Sauerstoffentzuges auf pflanzliche Organismen. Flora 92: 205-252.
- Duff, G. H. 1918. (808)
Some factors affecting the viability of the urediniospores of *Cronartium ribicola*. Phytopath. 8: 289-292.
- Dufrénoy, J. 1918. (809)
Les conditions écologiques du développement des champignons parasites. Etude de géographié botanique. Bull. Soc. Mycol. France 34: 8-26.
- Duggar, B. M. 1899. (811)
Peach leaf-curl and notes on the shot-hole effect of peaches and plums. N. Y. (Cornell) Agr. Exp. Sta. Bull. 164, 371-388.
- _____. 1901. (812)
Physiological studies with reference to the germination of certain fungous spores. Bot. Gaz. 31: 38-66.
- _____. 1909. (813)
The effects of conditions of growth upon susceptibility to fungus diseases. Trans. Mass. Hort. Soc., 51-66.
- _____. 1909. (814)
Fungous diseases of plants. Boston.
- _____. 1911. (815)
Physiological plant pathology. Phytopath. 1: 71-78.
- _____. and L. H. Bailey. 1897. (815a)
Notes upon celery. N. Y. (Cornell) Agr. Exp. Sta. Bull. 132, 201-230.
- Dungan, G. H. 1928. (816)
Effect of hail injury on the development of the corn plant. Jour. Amer. Soc. Agron. 20: 51-54.
- Dunn, G. A. 1921. (817)
A comparative study of the two races of *Rhizopus nigricans*. Physiol. Res. 2: 301-339.
- Dunn, M. S. 1926. (818)
Effects of certain acids and their sodium salts upon the growth of *Sclerotinia cinerea*. Amer. Jour. Bot. 13: 40-58.
- Dunnewald, T. J. 1928. (819)
Chlorosis of cottonwood trees. Wyo. Agr. Exp. Sta. Ann. Rept. 38, 140.

- Durandard, M. 1912. (820)
Variations de l'optimum de température sous l'influence du milieu chez le Mucor Rouxii.
Compt. Rend. Acad. Sci. (Paris) 155: 723-726.
- Durrell, L. W. 1917. (821)
Notes on curly dwarf symptoms on Irish potato. *Phytopath.* 7: 71. (Abst.).
- _____. 1918. (822)
Factors influencing the uredospore germination of *Puccinia coronata*. *Phytopath.* 8: 81-82. (Abst.).
- _____. 1922. (823)
Diplodia of corn in Iowa. *Phytopath.* 12: 29. (Abst.).
- _____. 1923. (824)
Dry rot of corn. Iowa Agr. Exp. Sta. Res. Bull. 77, 343-376.
- _____. 1925. (825)
Basisporium dry rot of corn. Iowa Agr. Exp. Sta. Res. Bull. 84, 139-160.
- _____. 1928. (826)
Smuts of Colorado grains. Colo. Agr. Exp. Sta. Bull. 334, 1-24.
- Dutton, W. C. 1928. (827)
Some effects of spraying materials on trees and fruit. Quebec Pomol. and Fruit Growing
Soc. Ann. Rept. 34, 14-27.
- _____. 1929. (828)
A method of modifying the lime-sulphur-lead arsenate spray to reduce foliage injury in
the apple. *Proc. Amer. Soc. Hort. Sci.* 25: 332-333.
- _____. 1930. (829)
Spraying materials and the control of apple scab. Mich. Agr. Exp. Sta. Spec. Bull. 203,
1-32.
- _____. 1930. (830)
Arsenicals sometimes injure peach trees. Mich. Agr. Exp. Sta. Quart. Bull. 13 (2):
55-56.
- _____. and H. M. Wells. 1923. (831)
Some physiological effects of bordeaux. *Proc. Amer. Soc. Hort. Sci.* 20: 277-281.
- Earle, F. S. 1899. (832)
Diseases of cotton. Ala. Agr. Exp. Sta. Bull. 107, 289-330.
- _____. 1902. (833)
Health and disease in plants. *Jour. N. Y. Bot. Gard.* 3: 195-202.
- Eastham, J. W. 1918. (834)
Report of the provincial plant pathologist. British Columbia Dept. Agr. Ann. Rept. 13,
32-36.
- _____. 1929. (835)
Report of Provincial Plant Pathologist, Vancouver. British Columbia Dept. Agr. Ann.
Rept. 23, 36-40.
- Eaton, F. M. 1930. (836)
The effect of boron on powdery mildew and spot blotch of barley. *Phytopath.* 20:
967-972.
- Ebaugh, W. C. 1907. (837)
Gases vs. solids: An investigation of the injurious ingredients of smelter smoke. *Jour.*
Amer. Chem. Soc. 29: 951-970.
- Eckerson, S. H. and J. G. Dickson. 1923. (838)
The influence of soil temperature and moisture on the chemical composition of wheat and
corn and their predisposition to seedling blight. *Phytopath.* 13: 50-51. (Abst.).
- Eddins, A. H. 1930. (839)
Dry rot of corn caused by *Diplodia macrospora* Earle. *Phytopath.* 20: 439-448.
- _____. 1930. (840)
A new *Diplodia* ear rot of corn. *Phytopath.* 20: 733-742.
- Eden, T. 1925. (841)
Soil acidity and plant growth. *Garden* 89: 175-176.
- Edgerton, C. W. 1908. (842)
The physiology and development of some anthracnoses. *Bot. Gaz.* 45: 367-407.
- _____. 1910. (843)
The bean anthracnose. La. Agr. Exp. Sta. Bull. 119, 1-54.
- _____. 1915. (844)
Effect of temperature on *Glomerella*. *Science* 41: 174. (Abst.).
- _____. 1915. (845)
Effect of temperature on *Glomerella*. *Phytopath.* 5: 247-259.

- _____. 1917. (846)
Department of plant pathology. La. Agr. Exp. Sta. Ann. Rept. 30, 14-15.
- _____. 1918. (847)
A study of wilt resistance in the seed-bed. *Phytopath.* 8: 5-14.
- _____. 1921. (848)
Onion diseases and onion seed production. La. Agr. Exp. Sta. Bull. 182, 1-20.
- _____. and C. C. Moreland. 1913. (849)
The bean blight and preservation and treatment of bean seed. La. Agr. Exp. Sta. Bull. 139, 1-43.
- _____. and _____. 1920. (850)
Tomato wilt. La. Agr. Exp. Sta. Bull. 174, 1-54.
- _____. and _____. 1921. (851)
Eggplant blight. La. Agr. Exp. Sta. Bull. 178, 1-44.
- _____. and E. C. Tims. 1927. (852)
Investigations on the sugar cane disease situation in 1925 and 1926. La. Agr. Exp. Sta. Bull. 197, 1-50.
- Edson, A. W. 1903. (853)
The black rot of the grape in North Carolina and its treatment. N. C. Agr. Exp. Sta. Bull. 185, 133-156.
- Edson, H. A. 1915. (854)
Seedling diseases of sugar beets and their relation to root-rot and crown-rot. *Jour. Agr. Res.* 4: 135-168.
- _____. and M. Shapovalov. 1920. (855)
Temperature relations of certain potato-rot and wilt-producing fungi. *Jour. Agr. Res.* 18: 511-524.
- Ehrenberg, P. 1906. (856)
Einige Beobachtungen über Pflanzenbeschädigungen durch Spüljauchenberieselung. *Zeitschr. Pflanzenkr.* 16: 193-202.
- _____. 1908. (857)
Wirkungen des Zinks bei Vegetationversuchen. *Chem. Zeit.* 32: 937. (Abst.).
- _____. 1914. (858)
Zur Gasvergiftung von Strassenbäumen. *Zeitschr. Pflanzenkr.* 24: 33-40.
- _____. 1919. (859)
Der Einfluss des Bodens und der Düngung auf Pflanzenkrankheiten. *Fühling's Landw. Zeit.* 68: 402-412.
- _____. and K. Schultze. 1916. (860)
Zur Gasvergiftung von Strassenbäumen. *Zeitschr. Pflanzenkr.* 26: 65-83.
- Eicke, S. 1914. (861)
Beiträge zur Rauchschädenforschung. *Naturw. Zeitschr. Forst- u. Landw.* 12: 201-207.
- Ellett, W. B. and J. T. Grissom. 1915. (862)
The amount of arsenic in solution when lead arsenate is added to different spray solutions. *Va. Agr. Exp. Sta. Tech. Bull.* 8, 160-164.
- Elliot, C. 1920. (863)
Halo-blight of oats. *Jour. Agr. Res.* 19: 139-172.
- _____. 1923. (864)
A bacterial disease of Proso millet. *Jour. Agr. Res.* 26: 151-159.
- _____. 1924. (865)
A bacterial leafspot of *Martynia*. *Jour. Agr. Res.* 29: 483-490.
- _____. 1927. (866)
Bacterial stripe blight of oats. *Jour. Agr. Res.* 35: 811-824.
- _____. 1930. (867)
Bacterial streak disease of sorghums. *Jour. Agr. Res.* 40: 963-976.
- _____. and E. F. Smith. 1929. (868)
A bacterial stripe disease of sorghum. *Jour. Agr. Res.* 38: 1-22.
- Elliot, J. A. 1924. (869)
Tomato wilt and its control in Arkansas. *Ark. Agr. Exp. Sta. Bull.* 194, 1-11.
- Ellis, J. H. 1919. (870)
Observations on rust control. *Man. Ext. Bull.* 41, 1-23.
- Emerson, R. A. 1923. (871)
The inheritance of blotch leaf in maize. N. Y. (Cornell) Agr. Exp. Sta. Mem. 70, 1-16.
- Endo, S. 1928. (872)
Studies on *Hypochnus centrifugus* from *Trifolium repens*. (Japanese). *Jour. Microbiol. and Pathol., Japan*, 22: 1851-1866.

- English, L. L. 1928. (873)
Some properties of oil emulsions influencing insecticidal efficiency. Ill. Nat. Hist. Survey Bull. 17 (5), 235-259.
- Enlows, E. M. A. 1918. (874)
A leafblight of *Kalmia latifolia*. Jour. Agr. Res. 13: 199-212.
- Ensign, M. R. 1919. (875)
Gas injury to wheat. Phytopath. 9: 266.
- Eriksson, J. 1895. (876)
Ueber die Förderung der Pilzsporenkeimung durch Kälte. Centbl. Bakt. 1: 557-565.
- _____. 1897. (877)
Eine allgemeine Übersicht der wichtigsten Ergebnisse der schwedischen Getreiderostuntersuchungen. Bot. Centbl. 72: 321-325, 354-362.
- _____. 1898. (878)
A general review of the principal results of Swedish research into grain rust. Bot. Gaz. 25: 26-38.
- _____. 1902. (879)
Ueber die Spezialisierung des Getreideschwarzrostes in Schweden und in anderen Ländern. Centbl. Bakt. 9: 654-658.
- _____. 1916. (880)
Über den Ursprung des primären Ausbruches der Krautfäule, *Phytophthora infestans* (Mont.) de By., auf dem Kartoffelfelde. Arkiv. Bot. 14 (20): 1-72.
- _____. and E. Henning. 1896. (881)
Die Getreideroste. Stockholm.
- Erni, W. 1928. (882)
Versuche zur Verbesserung der Schwefelkalkbrühe. Schweiz. Zeitschr. f. Obst- u. Weinbau 37: 454-455.
- Erwin, A. T. 1916. (883)
Late potato blight in Iowa. Iowa Agr. Exp. Sta. Bull. 163, 285-305.
- _____. 1916. (884)
Late potato blight epidemics in Iowa as correlated with climatic conditions. Proc. Iowa Acad. Sci. 23: 583-592.
- _____. 1921. (885)
Controlling downy mildew of lettuce. Iowa Agr. Exp. Sta. Bull. 196, 305-328.
- Esbjerg, N. 1929. (886)
Forsøg med Rentabiliteten ved Sprojtning af Aebletraeer. I. Tidsskr. Planteavl 35: 517-565.
- Esmarch, F. 1924. (887)
Zur Biologie des Kartoffelkrebses. Deutsche Landw. Presse 51: (2) 11-12, (3) 18-19.
- _____. 1926. (888)
Untersuchungen zur Biologie des Kartoffelkrebses. Angew. Bot. 8: 102-135.
- _____. 1927. (889)
Untersuchungen zur Biologie des Kartoffelkrebses II. Angew. Bot. 9: 88-124.
- _____. 1928. (890)
Die Herz- und Trockenfäule der Rüben. Die Kranke Pflanze 5: 161-163.
- _____. 1928. (891)
Untersuchungen zur Biologie des Kartoffelkrebses III. Angew. Bot. 10: 280-304.
- _____. 1929. (892)
Pflanzenschädigungen durch Winterfrost. Die Kranke Pflanze 6: 40-42.
- _____. 1929. (893)
Der Gürtelschorf der Rüben. Die Kranke Pflanze 6: 145-147.
- _____. 1929. (894)
Rauchschäden an landwirtschaftlichen Kulturpflanzen. Die Kranke Pflanze 6: 201-204.
- _____. 1930. (895)
Rauchschäden an landwirtschaftlichen Kulturpflanzen. Die Kranke Pflanze 7: 5-8, 18-23.
- Eustace, H. J. 1903. (896)
Two decays of stored apples. N. Y. (Geneva) Agr. Exp. Sta. Bull. 235, 123-131.
- _____. 1905. (897)
Winter injury to fruit trees. N. Y. (Geneva) Agr. Exp. Sta. Bull. 269, 323-343.
- _____. 1908. (898)
Investigations on some fruit diseases. N. Y. (Geneva) Agr. Exp. Sta. Bull. 297, 31-48.
- Evans, I. B. P. 1909. (899)
Bitter-pit of the apple. Transvaal Dept. Agr. Tech. Bull. 1, 1-18.

- _____. 1911. (900)
South African cereal rusts, with observations on the problem of breeding rust-resistant wheats. *Jour. Agr. Sci.* 4: 95-104.
- Ewart, A. J. 1911. (901)
On bitter pit and the sensitivity of apples to poison. *Proc. Roy. Soc. Victoria* 24: 367-419.
- _____. 1913 and 1914. (902)
On bitter pit and the sensitivity of apples to poison. *Proc. Roy. Soc. Victoria* 26: 12-44, 228-242 and 27: 342-349.
- _____. 1917. (903)
The cause of bitter pit. *Proc. Roy. Soc. Victoria* 30: 15-20.
- Ewell, E. E. 1902. (904)
Occurrence and importance of soluble manganese salts in soils. *Science* 16: 291.
- Ewert, R. 1905. (905)
Die physiologische Wirkung der Kupferkalkbrühe (Bordeauxbrühe). *Zeitschr. Pflanzenkr.* 15: 166-167. (Abst.).
- _____. 1905. (906)
Der wechselseitige Einfluss des Lichtes und der Kupferkalkbrühen auf den Stoffwechsel der Pflanze. *Landw. Jahrb.* 34: 233-310.
- _____. 1910. (907)
Die Überwinterung von Sommerkonidien pathogener Ascomyceten und die Widerstandsfähigkeit derselben gegen Kälte. *Zeitschr. Pflanzenkr.* 20: 129-141.
- _____. 1914. (908)
Die Schädigungen der Vegetation durch Teeröldämpfe und ihre Verhütung. *Zeitschr. Pflanzenkr.* 24: 257-273, 321-340.
- _____. 1917. (909)
Die Einwirkung von Teerdämpfen und anderen Rauchgasen auf die Pflanzen. *Gartenflora* 66: 245-251.
- _____. 1917. (910)
Die Ermittlung in den Teerdämpfen enthaltenen pflanzenschädlichen Bestandteile und die Unterscheidung ihrer Wirkung von anderen akuten Rauchbeschädigungen der Pflanzen. *Landw. Jahrb.* 50: 695-832.
- _____. 1926. (911)
Die Einwirkung von Teer und Teerdämpfung auf den Boden. *Landw. Jahrb.* 63: 103-128.
- Ezekiel, W. N. 1923. (912)
Hydrogen ion concentration and the development of *Sclerotinia* apothecia. *Science* 58: 166.
- _____. 1924. (913)
Fruit-rotting *Sclerotinias*. II. The American brown-rot fungi. *Md. Agr. Exp. Sta. Bull.* 271, 87-142.
- _____. 1929. (914)
Report of the Cotton Root-Rot Conference at College Station, Texas. *Phytopath.* 19: 687-689.
- _____. and D. C. Neal. 1930. (915)
Report of the cotton-root-rot conferences at Temple, Texas. *Phytopath.* 20: 889-894.
- _____. and J. J. Taubenhaus. 1930. (916)
Soil reaction as influencing *Phymatotrichum* root rot. *Phytopath.* 20: 117. (Abst.).
- _____. and E. C. Carlyle. 1930. (917)
Soil-reaction effects on *Phymatotrichum* root rot. *Phytopath.* 20: 803-815.
- Faber, F. C. von. 1908. (918)
Die Krankheiten und Schädlinge des Kaffees, I. *Centbl. Bakt.* 21: 97-117.
- Fabricius, L. 1930. (919)
Die Schäden des Winterwetters (1928-29) an den fremdländischen Holzarten des forstlichen Versuchsgartens in Grafroth bei München. *Forstw. Centbl.* 52: 32-47.
- Faes, H. 1927. (920)
La chlorose. *Terre Vaude* 19: 734-735.
- _____. 1928. (921)
Influence des conditions climatiques sur le développement des insectes et champignons parasites des cultures. *Ann. Agr. Suisse* 29: 221-228.
- Fahmy, T. 1927. (922)
The *Fusarium* disease (wilt) of cotton and its control. *Phytopath.* 17: 749-767.
- Fairchild, D. G. 1891. (923)
Diseases of the grape in western New York. *Jour. Mycol.* 6: 96-99.

- Fajardo, T. G. 1930. (924)
Studies on the mosaic disease of the bean (*Phascolus vulgaris* L.). *Phytopath.* 20: 469-494.
- _____. 1930. (925)
Studies on the properties of the bean-mosaic virus. *Phytopath.* 20: 883-888.
- Falck, R. 1907. (926)
Wachstumsgesetze, Wachstumsfaktoren und Temperaturwerte der holzerstörenden Mycelien. Möller's Hausschwammforschungen Herausgeg. 1: 53-152.
- _____. 1909. (927)
Die Lenzitesfäule des Koniferenholzes. Möller's Hausschwammforschungen Herausgeg. 3: 1-234.
- _____. 1912. (928)
Die Meruliusfäule des Bauholzes. Möller's Hausschwammforschungen Herausgeg. 6: 1-405.
- _____. 1924. (929)
Ueber das Eichensterben im Regierungsbezirk Stralsund nebst Beiträgen zur Biologie des Hallimaschs und Eichenmeltsaus. *Allg. Forst- und Jagdzeit.* 100: 298-317.
- _____. 1928. (930)
Lärchensterben und Theorie der Krebsbildung. I. Lärchensterben und Stammkrebsbildung. *Gartenbauwiss.* 1: 53-70.
- Fant, G. W. 1928. (931)
The development of peach sooty mold at normal and low temperatures. *Jour. Elisha Mitchell Sci. Soc.* 43: 217-219.
- Farcy, J. 1906. (932)
La chlorose de la vigne. *Rev. Vitic.* 26: 466.
- Faris, J. A. 1921. (933)
Violet root rot (*Rhizoctonia crocorum* D. C.) in the United States. *Phytopath.* 11: 412-423.
- _____. 1924. (934)
Factors influencing infection of *Hordeum sativum* by *Ustilago hordei*. *Amer. Jour. Bot.* 11: 189-214.
- _____. 1924. (935)
Factors influencing the infection of wheat by *Tilletia tritici* and *Tilletia laevis*. *Mycologia* 16: 259-282.
- _____. 1926. (936)
Cold chlorosis of sugar cane. *Phytopath.* 16: 885-891.
- _____. 1927. (937)
Field control of sugar cane root disease conditions. *Trop. Pl. Res. Found. Bull.* 6, 1-16.
- _____. 1928. (938)
Brown stripe of sugar cane in Cuba. *Phytopath.* 18: 135. (Abst.).
- _____. 1928. (939)
Three *Helminthosporium* diseases of sugar cane. *Phytopath.* 18: 753-773.
- _____. and R. V. Allison. 1927. (940)
Sugar cane root disease in Cuba: A progress report upon the root disease situation in 1925. *Phytopath.* 17: 61-82.
- Farley, A. J. 1925. (941)
Spraying experiments with peaches and apples. *N. J. Agr. Exp. Sta. Ann. Rept.* 46, 114-127.
- Farmer, J. B. 1914-15. (942)
On certain relations between the plant and its physical environment. *Jour. Roy. Soc. Hort., London*, 40: 197-207.
- _____. and S. E. Chandler. 1902. (943)
The influence of an excess of carbon dioxide in the air on the form and internal structure of plants. *Proc. Roy. Soc., London*, 70: 413-423.
- Farneti, R. 1906. (944)
Ricerche sperimentali ed anatomo—fisiologiche intorno alla influenza dell'ambiente e della sovrabbondante concimazione sulla diminuita o perduta resistenza al "brusone" del Riso bertone e di altre varietà introdotte dall'estero. *Riv. Path. Veg.* 2: 1-11.
- Fassbender, G. and A. Y. Grevillius. 1899. (945)
Über die Einwirkung von Essigsäuredämpfen und verdünnten Essigsäurelösungen auf Pflanzen. *Landw. Vers. Sta.* 52: 195-208.
- Faull, J. H. 1921. (946)
Forest pathology. Ontario Min. Lands and Forests Rept., 1920, 224-235.

- Faulwetter, R. C. 1916. (947)
 Physiology of *Bacterium malvacearum* Smith. S. C. Agr. Exp. Sta. Ann. Rept. 29, 49-64.
- _____. 1917. (948)
 Wind-blown rain, a factor in disease dissemination. Jour. Agr. Res. 10: 639-648.
- _____. 1919. (949)
 The angular leaf-spot of cotton. S. C. Agr. Exp. Sta. Bull. 198, 1-29.
- Fawcett, H. S. 1911. (950)
 Stem-end rot of citrus fruits. Fla. Agr. Exp. Sta. Bull. 107, 1-23.
- _____. 1917. (951)
 The geographical distribution of the citrus diseases melanose and stem-end rot. Johns Hopkins Univ. Circ. n. s. 3, 190-193.
- _____. 1921. (952)
 The temperature relations of growth in certain parasitic fungi. Univ. Calif. Publ. in Agr. Sci. 4: 183-232.
- _____. 1921. (953)
 Some relations of temperature to growth and infection in the citrus scab fungus, *Cladosporium citri*. Jour. Agr. Res. 21: 243-253.
- _____. 1924. (954)
 Influence of time and temperature on the rate of growth of certain fungi. Phytopath. 14: 119-120. (Abst.).
- _____. 1929. (955)
 Nematospores on pomegranates, citrus, and cotton in California. Phytopath. 19: 479-486.
- _____. and W. R. Barger. 1927. (960)
 Relation of temperature to growth of *Penicillium italicum* and *P. digitatum* and to citrus fruit decay produced by these fungi. Phytopath. 17: 746-747. (Abst.).
- _____. and _____. 1927. (961)
 Relation of temperature to growth of *Penicillium italicum* and *P. digitatum* and to citrus fruit decay produced by these fungi. Jour. Agr. Res. 35: 925-931.
- _____. W. T. Horne, and A. F. Camp. 1923. (962)
 Citrus blast and black pit. Calif. Agr. Exp. Sta. Tech. Paper 5, 1-24.
- _____. and H. A. Lee. 1926. (963)
 Citrus diseases and their control. New York.
- Fayard, J. 1920. (964)
 La chlorose des vignes. Rev. Vitic. 52: 434-435.
- Fellitzen, H. 1904. (965)
 Wie zeigt sich der Kalimangel bei Klee und Timotheegrass? Mitt. Ver. Förd. Moorkultur. 22: 39.
- Fellows, M. 1926. (966)
 The influence of carbon dioxide and oxygen on the growth of *Ophiobolus graminis* in pure cultures. Phytopath. 16: 81. (Abst.).
- Fellows, H. 1928. (967)
 The influence of oxygen and carbon dioxide on the growth of *Ophiobolus graminis* in pure culture. Jour. Agr. Res. 37: 349-355.
- Felt, E. P. 1913. (968)
 Injuries following the application of petroleum or petroleum products to dormant trees. Jour. Econ. Ent. 6: 160-161.
- Fergus, E. N. and W. D. Valleau. 1926. (969)
 A study of clover failure in Kentucky. Ky. Agr. Exp. Sta. Bull. 269, 139-210.
- Ferguson, M. C. 1902. (970)
 Germination of the spores of *Agaricus campestris* and other basidiomycetous fungi. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 16, 1-40.
- Fernald, H. T. and A. I. Bourne. 1922. (971)
 Injury to foliage by arsenical sprays. Mass. Agr. Exp. Sta. Bull. 207, 1-19.
- _____. and _____. 1922. (972)
 Injury to foliage by arsenical sprays. II and III. Mass. Agr. Exp. Sta. Bull. 210, 89-98.
- Findlay, W. P. K. 1928. (973)
 Some conditions influencing the development of bacterial disease of cotton (*Bacterium malvacearum*). Empire Cotton Growing Rev., London, 5: 29-39.
- Fink, B. 1918. (974)
 The distribution of fungi in Porto Rico. Mycologia 10: 58-61.
- Finlow, R. S. 1918. (975)
 Rhizoctonia in jute: The inhibiting effect of potash manuring. Agr. Jour. India (Spec. Sci. Cong. No.) 13: 65-72.

- Finnell, H. H. 1928. (976)
Effect of wind on plant growth. Jour. Amer. Soc. Agron. 20: 1206-1210.
- _____. 1929. (977)
Some effects of wind injury to growing plants. Proc. Okla. Acad. Sci. 9: 24-27.
- Fischer, E. 1908. (978)
Der Entwicklungsgang der Uredineen und die Entstehung neuer Formen im Pflanzenreich. Mitt. Nat. Ges., Bern, 1907: 186-154.
- _____. and E. Gäumann. 1929. (979)
Biologie der pflanzenbewohnenden parasitischen Pilze. Jena.
- Fischer, H. 1915. (980)
Versuche über Frostbeschädigung an Getreide und Hulsenfruchten. Jahresbr. Ver. Angew. Bot. 13: 92-141.
- Fischer, W. 1912. (981)
Beiträge zur Physiologie von Phoma betae Fr. Mitt. K. Wilhelm Inst. Landw., Bromberg, 5: 85-108.
- Fish, S. 1930. (982)
Brown rot and transit rot and their control. A report on consignments of peaches sent from the Goulburn Valley to the Sydney market. Jour. Dept. Agr. Victoria 28: 33-43.
- Fisher, D. F. 1918. (983)
Apple powdery mildew and its control in the arid regions of the Pacific Northwest. U. S. Dept. Agr., Dept. Bull. 712, 1-28.
- _____. 1919. (984)
Apple powdery mildew a serious menace to orchards. Better Fruit 13 (10): 3-6.
- _____. 1919. (985)
Factors that influence diseases of apples in storage. Better Fruit 14 (3): 3-4, 23-28.
- _____. 1921. (986)
Winter injury. Proc. Wash. State Hort. Assoc. 16: 27-35.
- _____. 1921. (987)
Drouth spot and related physiological diseases. Proc. Wash. Sta. Hort. Assoc. 16: 35-39.
- _____. 1923. (988)
Water core. Proc. Wash. Sta. Hort. Assoc. 19: 98-104.
- _____. and C. Brooks. 1920. (989)
Drouth-spot and related physiological diseases. Agr. Jour. Dept. Agr. British Columbia 5: 290-295.
- _____. and _____. 1927 and 1928. (990)
Apple water-core theories revised. Better Fruit 22 (6): 5, 21; 23 (1): 14, 15, 22, 24, 26.
- _____. and E. J. Newcomer. 1919. (991)
Controlling important fungus and insect enemies of the pear in the humid sections of the Pacific Northwest. U. S. Dept. Agr., Farmers' Bull. 1056, 1-34.
- Fitch, C. L. 1915. (992)
Studies of health in potatoes. Colo. Agr. Exp. Sta. Bull. 216, 1-31.
- Flachs, K. 1928. (993)
Die Septoria-Blattfleckenkrankheit des Selleries und ihre Bekämpfung. Prakt. Blätter Pflanzenbau u. Pflanzenschutz 6: 93-96.
- Fletcher, J. 1889. (994)
Black knot of the grape. Canada Exp. Farms Rept. 87.
- Flor, H. H. 1929. (995)
A study of a species of Pythium in its action on sugar cane. La. Agr. Exp. Sta. Bien. Rept., 1928-29, 54-55.
- _____. 1930. (996)
Factors influencing the severity of the root rot troubles of sugar cane. La. Agr. Exp. Sta. Bull. 212, 1-40.
- _____. 1930. (997)
Relation of environmental factors to growth and pathogenicity of Pythium isolated from roots of sugar cane. Phytopath. 20: 319-328.
- Flora, S. D. and S. L. Bush. 1917. (998)
Damage by hail in Kansas. U. S. Dept. Agr., Mo. Weather Rev. 45: 359-361.
- Floyd, B. F. 1910. (999)
Chlorosis of cassava. Fla. Agr. Exp. Sta. Ann. Rept., 1909, 76-78.
- _____. 1912. (1000)
Problems in citrus nutrition. Fla. Agr. Exp. Sta. Ann. Rept., 1911, 68-81.

- _____. 1913. (1001)
Experiments with citrus dieback. Fla. Agr. Exp. Sta. Ann. Rept., 1912, 102-114.
- _____. 1917. (1002)
Some cases of injury to citrus trees apparently induced by ground limestone. Fla. Agr. Exp. Sta. Bull. 137, 161-179.
- _____. 1917. (1003)
Dieback, or Exanthema of citrus trees. Fla. Agr. Exp. Sta. Bull. 140, 1-31.
- _____. 1918. (1004)
Injury to citrus trees by the improper use of ground limestone. Fla. Agr. Exp. Sta. Ann. Rept., 1917, 35-46.
- _____. and H. E. Stevens. 1912. (1005)
Melanose and stem-end rot. Fla. Agr. Exp. Sta. Bull. 111, 1-16.
- Flühler, A. 1874. (1006)
Die Krankheit der Agrumen in Sicilien. Biedermann's Centbl. 5: 368-372.
- Föex, E. 1924. (1007)
Quelques observations sur les conditions qui favorisent le développement et l'extension des rouilles des céréales. Rev. Path. Vég. et Ent. Agr. 11: 32-41.
- _____. 1924. (1008)
Quelques maladies cryptogamiques de l'Olivier. Comp. Rend. Trav. VI Cong. Intern. d'Oléiculture, Nice, 1923, 179-209.
- _____. 1925. (1009)
Des facteurs qui assurent la sensibilité et la résistance aux rouilles de céréales. Compt. Rend. Assoc. Franc. Avanc. Sci. 49: 330-333.
- Foister, C. E. 1929. (1010)
The relation of weather to plant diseases. Conf. Empire Meteorologists, 168-215.
- Fokin, A. D. 1925. (1011)
Contribution to the ecology of sooty mould, *Fumago vagans* Pers. (Russian). Morbi Plantarum, Leningrad, 14: 29-33.
- Folsom, D. and T. T. Ayres. 1928. (1012)
Apple spraying experiments in 1926 and 1927. Me. Agr. Exp. Sta. Bull. 348, 145-176.
- _____. and R. Bonde. 1926. (1013)
Potato spraying and dusting experiments, 1921 to 1925. Me. Agr. Exp. Sta. Bull. 334, 205-284.
- Forbes, R. H. 1917. (1014)
Certain effects under irrigation of copper compounds upon crops. Univ. Calif. Publ. Agr. Sci. 1: 395-494.
- Forster, H. C. and A. J. Vasey. 1929. (1015)
The relation between flag smut infection and manurial treatment. Jour. Dept. Agr. Victoria 27: 321-330.
- Foster, A. C. and G. F. Weber. 1924. (1016)
Celery diseases in Florida. Fla. Agr. Exp. Sta. Bull. 173, 23-77.
- Frank, A. 1900. (1017)
Beeinflussung von Weizenschädlingen durch Bestellzeit und Chilisalpeter-Düngung. Arb. K. Biol. Anst. Land- u. Forstw. 1: 115-125.
- Frank, A. 1925. (1018)
1924 information on winter injury, mosaic and other diseases of raspberries in western Washington. Proc. Wash. Sta. Hort. Assoc. 20: 128-135.
- Frazer, P. 1907. (1019)
Search for causes of injury to vegetation in an urban villa near a large industrial establishment. Trans. Amer. Inst. Mining Eng. 38: 498-555.
- Frear, W. 1915. (1020)
Sour soils and liming. Pa. Dept. Agr. Bull. 261, 1-221.
- Fred, E. B. 1916. (1021)
Relation of green manures to the failure of certain seedlings. Jour. Agr. Res. 5: 1161-1176.
- Freeman, E. M. 1902. (1022)
Experiments on the brown rust of Bromes (*Puccinia dispersa*). Ann. Bot. 16: 487-494.
- _____. 1911. (1023)
Resistance and immunity in plant diseases. Phytopath. 1: 109-115.
- _____. and E. C. Johnson. 1909. (1024)
The loose smuts of barley and wheat. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 152, 1-43.
- _____. and _____. 1911. (1025)
The rusts of grains in the United States. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 216, 1-87.

- Freiberg, G. W. 1917. (1026)
Studies in the mosaic diseases of plants. *Ann. Mo. Bot. Gard.* 4: 175-232.
- Frey, C. N. 1924. (1027)
The cytology and physiology of *Venturia inequalis* (Cooke) Winter. *Trans. Wis. Acad. Sci.* 21: 303-343.
- and G. W. Keitt. 1925. (1028)
Studies of spore dissemination of *Venturia inequalis* (Cke.) Wint. in relation to seasonal development of apple scab. *Jour. Agr. Res.* 30: 529-540.
- Freytag, M. 1868. (1029)
Ueber den Einfluss des Zincoxyds und seiner Verbindungen auf die Vegetation. *Mitt. König. Landw. Akad., Poppelsdorf*, 1: 82-99.
- 1870. (1029a)
Wissenschaftliches Gutachten über den Einfluss, welchen die Hüttenwerke der mandsfelder kupferschieferbonenden Gerwerkschaft auf die Vegetation und indirect auf Menschen und Thiere ausüben. *Eisleben*.
- 1882. (1030)
Die schädlichen Bestandtheile des Hüttenrauchs, der Kupfer—Blei—und Zink—Hütten und ihre Beseitigung. *Landw. Jahrb.* 11: 315-357.
- Fritz, C. W. 1923. (1031)
Cultural criteria for the distinction of wood-destroying fungi. *Trans. Roy. Soc. Canada* 17 (Sec. 5): 191-288.
- Fromme, F. D. 1913. (1032)
The culture of cereal rusts in the greenhouse. *Bull. Torrey Bot. Club.* 40: 501-521.
- 1920. (1033)
The development of loose smut of wheat as modified by soil fertility. *Phytopath.* 10: 53. (Abst.).
- and T. J. Murray. 1919. (1034)
Angular-leaf spot of tobacco, an undescribed bacterial disease. *Jour. Agr. Res.* 16: 219-228.
- and S. A. Wingard. 1922. (1035)
Blackfire and wildfire of tobacco and their control. *Va. Agr. Exp. Sta. Bull.* 228, 1-19.
- Frontz, L. 1928. (1036)
The effect of smoke and gas on forest and shade trees. *Forest Leaves* 21: 170-171.
- Früh, J. 1902. (1037)
Die Abbildung der vorherrschenden Winde durch die Pflanzenwelt. *Zurich*, 97 pp.
- Fudge, B. R. 1930. (1038)
Soil acidity and its relation to growth of citrus. *Citrus Indus.* 11 (9): 4-6.
- Fukushi, T. 1925. (1039)
Studies on the apple rust caused by *Gymnosporangium yamadae* Miyabe. *Jour. Col. Agr., Hokkaido Imp. Univ.*, 15: 269-307.
- Fulton, H. R. 1906. (1040)
Chemotropism of fungi. *Bot. Gaz.* 41: 81-108.
- 1912. (1041)
An anthracnose of red clover caused by *Gloeosporium caulivorum*. *Pa. Agr. Exp. Sta. Ann. Rept.*, 249.
- 1927. (1042)
Organic fertilizers and cotton wilt control. *Science* 66: 193-194.
- and J. J. Bowman. 1929. (1043)
Infection of fruit of citrus by *Pseudomonas citri*. *Jour. Agr. Res.* 39: 403-426.
- Funchess, M. J. 1918. (1044)
The development of soluble manganese in acid soils as influenced by certain nitrogenous fertilizers. *Ala. Agr. Exp. Sta. Bull.* 201, 37-78.
- Furlani, J. 1906. (1045)
Über den Einfluss der Kohlensäure auf den Laubfall. *Osterr. Bot. Zeitschr.* 56: 400-406.
- Fuschini, C. 1911. (1046)
Il solfato ferroso esplica un azione utile contro le "ruggini" delle piante? *Riv. R. Scuola Vit. Enol.* 17: 443-446.
- Gabnay, F. von. 1913. (1047)
Über die pflanzenschädliche Wirkung des Teers. *Centbl. Gesam. Forstw.* 39: 497-504.
- Gabotto, L. 1927. (1048)
I danni prodotti dalla grandine al grano. *Boll. Fitopath. Ent. Agr., Min. Econ. Naz.* 5 (5): 1-16.
- 1928. (1049)
La bolla nera del Pero. *Coriamo Pianta* 6: 66-67.

- Gadd, C. H. 1928. (1050)
Treatment of tea root diseases—Diagnosis and control. *Planters' Chron.* 23: 613-618, 634-635.
- _____. 1929. (1051)
The treatment of the Poria root disease. *Tea Quarterly* 2: 16-21.
- _____. 1929. (1052)
The relationship between food reserves of the tea bush and disease. *Tea Quarterly* 2: 54-64.
- Gail, F. W. 1926. (1053)
Osmotic pressure of cell sap and its possible relation to winter killing and leaf fall. *Bot. Gaz.* 81: 434-445.
- Gaillot, L. 1897. (1054)
Note sur le pied noir du blé ou piétin des céréales. *Dept. Aisne Sta. Agron. Bull.* 8, 63-66.
- Gaisberg, E. V. 1928. (1055)
Studien über den Lärchenkrebspilz, *Dasyscypha willkommii*, insbesondere über die Keimung seiner Sporen. *Centbl. Bakt.* 73: 206-233.
- Gallagher, P. H. 1929. (1056)
Investigation into the relation of soil conditions to failures in the beet crop 1928. *Jour. Dept. Agr., Dublin*, 29: 61-81.
- Galloway, B. T. 1887. (1056a)
Celery leaf blight. *U. S. Dept. Agr. Rept.*, 1886, 117-120.
- _____. 1889. (1057)
Additional notes on celery-leaf blight. *U. S. Dept. Agr. Rept.*, 1888, 398-399.
- _____. 1894. (1058)
Some destructive potato diseases: What they are and how to prevent them. *U. S. Dept. Agr., Farmers' Bull.* 15, 1-8.
- _____. 1896. (1059)
Frosts and freezes as affecting cultivated plants. *U. S. Dept. Agr. Yrbk.*, 1895, 143-158.
- _____. 1896. (1060)
The pathology of plants: Lines of investigation that might be undertaken by experiment stations. *Exp. Sta. Rec.* 7: 725-735.
- _____. 1899. (1061)
Potato diseases and their treatment. *U. S. Dept. Agr., Farmers' Bull.* 91, 1-11.
- _____. and A. F. Woods. 1897. (1062)
Diseases of shade and ornamental trees. *U. S. Dept. Agr. Yrbk.*, 1896, 237-254.
- Gard, M. 1925. (1063)
La maladie du noicissement chez le noyer cultivé (*Juglans regia* L.). *Compt. Rend. Assoc. Franc. Avang. Sci.* 49: 382-383.
- _____. 1926. (1064)
Sur la chlorose du Noyer cultivé (*Juglans regia* L.). *Rev. Path. Vég. et Ent. Agr.* 13: 265-266.
- _____. 1928. (1065)
Sur les causes de l'infécondité des Noyers et de la Vigne en 1926. *Ann. des Ephyties* 14: 132-162.
- _____. 1928. (1066)
Pourridié du noyer cultivé (*Juglans regia* L.) et carbonate de chaux. *Compt. Rend. Acad. Sci. (Paris)* 186: 1373-1375.
- _____. 1929. (1067)
Pourridié et carbonate de chaux. *Compt. Rend. Acad. Sci. (Paris)* 189: 497-498.
- Gardner, M. W. 1918. (1068)
Anthracnose of cucurbits. *U. S. Dept. Agr., Dept. Bull.* 727, 1-68.
- _____. 1918. (1069)
The mode of dissemination of fungous and bacterial diseases of plants. *Mich. Acad. Sci. Rept.* 20: 357-423.
- _____. 1920. (1070)
Peronospora in turnip roots. *Phytopath.* 10: 321-322.
- _____. 1924. (1071)
Indiana plant diseases, 1921 and 1922. *Proc. Ind. Acad. Sci.* 1923: 163-211.
- _____. 1925. (1072)
Cladosporium leaf mold of tomato: Fruit invasion and seed transmission. *Jour. Agr. Res.* 31: 519-540.
- _____. 1929. (1073)
Sporotrichum fruit spot and surface rot of apple. *Phytopath.* 19: 443-451.

- _____. 1930. (1074)
 Leaf rust investigations. Ind. Agr. Exp. Sta. Ann. Rept., 1929, 22-23.
- _____, L. Green, and C. E. Baker. 1923. (1075)
 Apple blotch. Ind. Agr. Exp. Sta. Bull. 267, 1-32.
- _____, and J. B. Kendrick. 1921. (1076)
 Bacterial spot of tomato. Jour. Agr. Res. 21: 123-156.
- _____, and _____. 1923. (1077)
 Bacterial spot of tomato and pepper. Phytopath. 13: 307-315.
- _____, and _____. 1925. (1078)
 Bacterial spot of cowpea and lima bean. Jour. Agr. Res. 31: 841-863.
- Gardner, V. R., F. C. Bradford, and H. D. Hooker. 1922. (1079)
 Pathological conditions associated with excesses or deficiencies in moisture. The Fundamentals of Fruit Production. pp. 83-100. New York.
- Garman, H. 1899. (1080)
 A method of avoiding lettuce rot. Ky. Agr. Exp. Sta. Bull. 81, 1-4.
- _____. 1899. (1081)
 The elms and their diseases. Ky. Agr. Exp. Sta. Bull. 84, 53-75.
- _____. 1927. (1082)
 Plant disease investigations. Ky. Agr. Exp. Sta. Ann. Rept. 40, 15-18.
- Garner, W. W. et al. 1923. (1083)
 Sand drown, a chlorosis of tobacco due to magnesium deficiency, and the relation of sulfates and chlorids of potassium to the disease. Jour. Agr. Res. 23: 27-40.
- _____, et al. 1930. (1084)
 Magnesium and calcium requirements of the tobacco crop. Jour. Agr. Res. 40: 145-168.
- _____, J. E. McMurtrey, and E. G. Moss. 1922. (1085)
 Sand drown, a chlorosis of tobacco and other plants resulting from magnesium deficiency. Science 56: 341-342.
- _____, F. A. Wolf, and E. G. Moss. 1917. (1086)
 The control of tobacco wilt in the flue-cured district. U. S. Dept. Agr., Dept. Bull. 562, 1-20.
- Gassner, G. 1915. (1087)
 Über einen Fall von Weissblatterigkeit durch Kältewirkung. Ber. Deutsch. Bot. Ges. 33: 478-486.
- _____. 1916. (1088)
 Die Getreideroste und ihre Auftreten im subtropischen östlichen Südamerika. Centbl. Bakt. 44: 305-381.
- _____. 1916. (1089)
 Untersuchungen über die Abhängigkeit des Auftretens der Getreideroste von Entwicklungszustand der Nährpflanze und von äusseren Faktoren. Centbl. Bakt. 44: 512-617.
- _____. 1919. (1090)
 Untersuchungen über die Sortenempfindlichkeit von Getreidepflanzen gegen Rostpilze. Centbl. Bakt. 49: 185-243.
- _____. 1925. (1091)
 Ueber die Abhängigkeit des Steinbrandauftretens von der Bodenbeschaffenheit. Angew. Bot. 7: 80-87.
- _____. 1927. (1092)
 Die Frage der Rostanfälligkeit als ernährungsphysiologisches Problem. Angew. Bot. 9: 531-541.
- _____, and G. O. Appel. 1927. (1093)
 Untersuchungen über die Infektionsbedingungen der Getreiderostpilze. Arb. Biol. Reichsanst. Land- u. Forstw. 15: 417-436.
- _____, and W. Straib. 1928. (1094)
 Untersuchungen über die Infektionsbedingungen von Puccinia glumarum und Puccinia graminis. Arb. Biol. Reichsanst. Land- u. Forstw. 16: 609-629.
- _____, and _____. 1929. (1095)
 Untersuchungen über die Abhängigkeit des Infektionsverhaltens der Getreiderostpilze von Kohlensäuregehalt der Luft. Phytopath. Zeitschr. 1: 1-30.
- _____, and _____. 1929. (1096)
 Experimentelle Untersuchungen über das Verhalten der Weizensorten gegen Puccinia glumarum. Phytopath. Zeitschr. 1: 215-275.
- Gates, F. C. 1915. (1097)
 Wind burn in Amorphophallus. Bot. Gaz. 60: 414.

- Gatin, C. L. 1911. (1098)
Influence du goudronnage des routes sur la végétation des arbres du bois de Boulogne.
Compt. Rend. Acad. Sci. (Paris) 153: 202-204, 688-690.
- _____. 1912. (1099)
Die gegen die Abnutzung und den Staub der Strassen Angewendeten Verfahren und ihre
Wirkung auf die Vegetation. Zeitschr. Pflanzenkr. 22: 193-203.
- _____. 1912. (1100)
L'action des poussières goudronneuses. Ann. Sci. Agron. 4: 321-331.
- Gauch, A. and J. Durand. 1920. (1101)
Nature de la maladie du court-noué. Prog. Agr. et Vitic. 73: 540-543.
- Gaudineau and L. Guyot. 1925. (1102)
De quelques facteurs qui influencent le développement de la maladie du pietin du Blé.
Rev. Path. Vég. et Ent. Agr. 12: 317-342.
- Gaul, F. 1913. (1103)
Der Einfluss der Temperatur auf die Ausbreitung der Kartoffelkrankheit. Deutsche.
Landw. Presse 40: 1094.
- Gäumann, E. 1925. (1104)
Untersuchungen über die Herzkrankheit (Phyllonekrose) der Runkel- und Zuckerrüben
I. Vierteljahrsschr. Nat. Ges., Zurich, 70: 1-106.
- _____. 1928. (1105)
Ueber die Bekämpfung des Wurzelbrandes der Zuckerrüben. Landw. Jahrb. Schweiz.
42: 571-582.
- _____. 1930. (1106)
Untersuchungen über die Herzkrankheit (Phyllonekrose) der Runkel- und Zuckerrüben
II. Landw. Jahrb. Schweiz. 44: 143-150.
- Gedroits, K. K. 1910. (1107)
The effect of acids, alkalis, and some inorganic salts on plants. (Russian). Russ. Jour.
Exp. Landw. 11: 544-578, 641-678.
- Gericke, W. F. 1922. (1108)
"Magnesia injury" of plants grown in nutrient solutions. Bot. Gaz. 74: 110-113.
- Gerlach, M. 1908. (1109)
Besondere Vorkommnisse und Beobachtungen bei Waldbeschädigungen durch Rauchgase.
Zeitschr. Forst. u. Jagdw. 40: 429-437.
- Gerneck, R. 1912. (1110)
Einfluss der Witterung auf das Auftreten der Peronosporakrankheit der Reben. Weinbau
u. Weinhandel 30: 199-200.
- Gibs, W. 1924. (1111)
Veränderungen der Brandanfälligkeit durch äussere Bedingungen. Jour. Landw. 62:
111-124.
- Gibson, C. M. 1904. (1112)
Notes on infection experiments with various Uredineae. New Phytol. 3: 184-191.
- Gibson, F. 1922. (1113)
Sunburn and aphid injury of soybeans and cowpeas. Ariz. Agr. Exp. Sta. Tech. Bull. 2,
41-46.
- Giddings, N. J. 1910. (1114)
A bacterial soft rot of muskmelon, caused by *Bacillus melonis* n. sp. Vt. Agr. Exp. Sta.
Bull. 148, 359-416.
- _____. 1911. (1115)
Apple rust. Farm and Orchard 1 (12): 3-5.
- _____. 1917. (1116)
Potato and tomato diseases. W. Va. Agr. Exp. Sta. Bull. 165, 1-24.
- _____. and A. Berg. 1916. (1117)
New or noteworthy facts concerning apple rust. Phytopath. 6: 79-80.
- _____. and _____. 1918. (1118)
Infection and immunity in apple rust. W. Va. Agr. Exp. Sta. Bull. 170, 1-71.
- Gilford, C. M. 1911. (1119)
The damping-off of coniferous seedlings. Vt. Agr. Exp. Sta. Bull. 157, 141-171.
- Gilbert, B. E., F. T. McLean, and L. J. Hardin. 1926. (1120)
The relation of manganese and iron to a lime-induced chlorosis. Soil Sci. 22: 437-446.
- _____. and _____. 1928. (1121)
A "deficiency disease": The lack of available manganese in a lime-induced chlorosis.
Soil Sci. 26: 27-31.

- Gilbert, W. W. 1909. (1122)
The root-rot of tobacco caused by *Thielavia basicola*. U. S. Dept. Agr., Bur. Pl. Indus.
Bull. 158, 1-48.
- _____. 1913. (1123)
Cotton anthracnose and how to control it. U. S. Dept. Agr., Farmers' Bull. 555, 1-8.
- _____. 1914. (1124)
Cotton wilt and root-knot. U. S. Dept. Agr., Farmers' Bull. 625, 1-21.
- _____. 1921. (1125)
Cotton diseases and their control. U. S. Dept. Agr., Farmers' Bull. 1187, 1-32.
- Gile, P. L. 1911. (1126)
Relation of calcareous soils to pineapple chlorosis. Porto Rico Agr. Exp. Sta. Bull. 11,
1-45.
- _____. 1916. (1127)
Chlorosis of pineapple induced by manganese and carbonate of lime. Science 44:
855-857.
- _____. and J. O. Carrero. 1915. (1128)
Chlorosis of sugar cane and rice. Porto Rico Agr. Exp. Sta. Ann. Rept., 1914, 14-16.
- _____. and _____. 1918. (1129)
Chlorosis of sugar cane. Porto Rico Agr. Exp. Sta. Ann. Rept., 1917, 10-20.
- _____. and _____. 1920. (1130)
Cause of lime-induced chlorosis and availability of iron in the soil. Jour. Agr. Res. 20:
33-61.
- Gillespie, L. J. 1918. (1131)
The growth of the potato scab organism at various hydrogen ion concentrations as
related to the comparative freedom of acid soils from the potato scab. Phytopath. 8:
257-269.
- _____. and L. A. Hurst. 1918. (1132)
Hydrogen-ion concentration—soil type—common potato scab. Soil. Sci. 6: 219-236.
- Gilman, J. C. 1914. (1133)
The relation of temperature to the infection of cabbage by *Fusarium conglutinans*
Wollenw. Phytopath. 4: 404. (Abst.).
- _____. 1916. (1134)
Cabbage yellows and the relation of temperature to its occurrence. Ann. Mo. Bot. Gard.
3: 25-84.
- Ginsburg, J. M. 1925. (1135)
Composition and appearance of soybean plants grown in culture solutions each lacking a
different essential element. Soil Sci. 20: 1-13.
- _____. 1926. (1136)
Chemical studies of the New Jersey dry-mix spray in relation to arsenical injury. N. J.
Agr. Exp. Sta. Ann. Rept. 47, 199-206.
- _____. 1929. (1137)
Injury from oil-sulfur sprays. N. J. Agr. Exp. Sta. Ann. Rept. 50, 175-176.
- Girardi, J. 1920. (1138)
La chlorosis de les plantes. Bol. Mens Def. Agr. Uruguay, 300-302.
- Gladwin, F. E. 1915. (1139)
Observations relative to an obscure grape affection. Phytopath. 5: 169-174.
- _____. 1917. (1140)
Winter injury of grapes. N. Y. (Geneva) Agr. Exp. Sta. Bull. 433, 107-139.
- _____. 1918. (1141)
A non-parasitic malady of the vine. N. Y. (Geneva) Agr. Exp. Sta. Bull. 449, 99-110.
- _____. 1928. (1142)
Downy and powdery mildews of the grape and their control. N. Y. (Geneva) Agr. Exp.
Sta. Bull. 560, 1-14.
- Gleispach, M. 1928. (1143)
Über den Einfluss von Dämpfen und Gasen auf den Laubfall und andere Organablösungen.
Sitzungsber. Akad. Wiss., Wien, 137: 661-689.
- Gloyer, W. O. 1921. (1144)
Blister canker of apple and its control. N. Y. (Geneva) Agr. Exp. Sta. Bull. 485, 1-71.
- _____. 1922. (1145)
Bacterial blight of beans under field conditions. Abst. Bact. 6: 40. (Abst.).
- _____. 1924. (1146)
The effect of late planting on the bacterial blight of beans. Phytopath. 14: 27. (Abst.).

- _____. 1926. (1147)
The dwarfing, shrivelling, and dropping of cherries and prunes. N. Y. (Geneva) Agr. Exp. Sta. Bull. 540, 1-18.
- _____. and H. Glasgow. 1928. (1148)
Defoliation of cherry trees in relation to winter injury. N. Y. (Geneva) Agr. Exp. Sta. Bull. 555, 1-27.
- Glynn, M. D. 1925. (1149)
Infection experiments with wart disease of potatoes. *Synchytrium endobioticum* (Schilb.) Pers. Ann. Appl. Biol. 12: 34-60.
- _____. 1926. (1150)
The viability of the winter sporangium of *Synchytrium endobioticum* (Schilb.) Pers., the organism causing wart disease in potato. Ann. Appl. Biol. 13: 19-36.
- Godden, W. and R. E. R. Grimmett. 1928. (1151)
Factors affecting the iron and manganese content of plants with special reference to herbage causing "pining" and "bush-sickness." Jour. Agr. Sci. 18: 363-368.
- Godfrey, G. H. 1923. (1152)
A phytophthora foot rot of rhubarb. Jour. Agr. Res. 23: 1-26.
- _____. 1923. (1153)
Gray mold of castor bean. Jour. Agr. Res. 23: 679-715.
- _____. 1926. (1154)
Effect of temperature and moisture on nematode root knot. Jour. Agr. Res. 33: 223-254.
- _____. and H. T. Morita. 1929. (1155)
Effects of some environmental factors on the root-knot nematode. Phytopath. 19: 83-84. (Abst.).
- Goff, E. S. 1896. (1156)
The tip-burn of potatoes. Wis. Agr. Exp. Sta. Ann. Rept. 13, 240-243.
- Gokhale, V. G., R. S. Kasargode, and S. L. Ajrekar. 1916. (1157)
The "band" disease of betel-nut palms in the Konkan. Poona Agr. Col. Mag. 8: 49-53.
- Golubev, B. 1926. (1158)
Zur Frage über die verschiedene Reaktion der Böden auf Kalkdüngung im Zusammenhang mit der positiven und Schädlichen Wirkung des Kalkes auf die Entwicklung von Pflanzen. (Russian) Ergeb. Veg. Lab. Landw. Akad., Timirjazinsk, 13: 86-114.
- Goodspeed, T. H., J. M. McGee, and R. W. Hodgson. 1918. (1159)
Note on the effect of illuminating gas and its constituents in causing abscission of flowers in Nicotiana and citrus. Univ. Calif. Publ. Bot. 5: 439-450.
- Goodwin, B. G. 1929. (1160)
Blister disease or cracking of apples. Successful remedial measures in Nelson district. Jour. Agr. New Zealand 39: 305-307.
- Gordon, W. L. 1930. (1161)
Effect of temperature on host reactions to physiologic forms of *Puccinia graminis avenae* Erikss. & Henn. Sci. Agr. 11: 95-103.
- Goss, R. W. 1921. (1162)
Temperature and humidity studies of some Fusaria rots of the Irish potato. Jour. Agr. Res. 22: 65-79.
- _____. 1922. (1163)
Relation of environment and other factors to potato wilt caused by *Fusarium oxysporum*. Nebr. Agr. Exp. Sta. Res. Bull. 23, 1-84.
- _____. 1923. (1164)
Potato diseases in Nebraska. Nebr. Agr. Exp. Sta. Bull. 186, 1-32.
- _____. 1924. (1165)
Effect of environment on potato degeneration diseases. Nebr. Agr. Exp. Sta. Res. Bull. 26, 1-40.
- _____. 1924. (1166)
Potato wilt and stem-end rot caused by *Fusarium eumartii*. Nebr. Agr. Exp. Sta. Res. Bull. 27, 1-83.
- _____. 1930. (1167)
The symptoms of spindle tuber and unmottled curly dwarf of the potato. Nebr. Agr. Exp. Sta. Res. Bull. 47, 1-39.
- _____. and G. L. Peltier. 1925. (1168)
Further studies of the effect of environment on potato degeneration diseases. Nebr. Agr. Exp. Sta. Res. Bull. 29, 1-32.
- Gossard, H. A. and R. C. Walton. 1917. (1169)
Fire-blight infection. Ohio Agr. Exp. Sta. Mo. Bull. 2 (11): 357-364.

- Gourley, J. H. and G. T. Nightingale. 1921. (1170)
The effects of shading some horticultural plants. N. H. Agr. Exp. Sta. Tech. Bull. 18, 1-22.
- Graebner, P. 1907. (1171)
Über einige nightparasitäre Pflanzenkrankheiten des Sommers 1907. Jahresbr. Ver. Angew. Bot. 5: 226-233.
- _____. 1908. (1172)
Einige wenigbeachtete nichtparasitäre Pflanzenkrankheiten. Gartenflora 57: 420-430.
- _____. 1909. (1173)
Wirkung von Frösten während der Vegetation-periode. Zeitschr. Forst. u. Jagdw. 41: 421-431.
- _____. 1921. (1174)
Lehrbuch der Nichtparasitären Pflanzenkrankheiten. Berlin. 1920. Also Forstwiss. Centbl. 43: 184-185. (Abst.).
- _____. 1924. (1175)
Ueber einige Pflanzenkrankheiten des ungewöhnlichen Sommers 1923 und des folgenden Winters. Denkschrift zum 100-jährigen Bestehen der Höheren Gärtnerlehranstalt. Berlin-Dahlem fruher Wildpark.
- Graewitz, F. 1898. (1176)
Ueber den Einfluss des Lichtes auf der Entwicklung einiger Pilze. Inaug. Diss. Leipsig.
- Graffin, R. 1920. (1177)
Sur la disparition de l'orme sous les gaz de guerre. Compt. Rend. Acad. Agr. France 6: 609.
- Graham, V. O. 1927. (1178)
Ecology of fungi in the Chicago region. Bot. Gaz. 83: 267-287.
- Grainger, J. and G. Cockerham. 1930. (1179)
Some properties of the virus extract of dock mosaic. Proc. Leeds Phil. Soc. 2: 120-124.
- Gram, E. 1922. (1180)
Forsøg med avlsstedets indflydelse paa Kertoffelens bladrulesyge. Tidsskr. Planteavl. 28: 769-806.
- _____. 1926. (1181)
Seed disinfection II. Experiments with mangold and sugar beet seed 1920-1925. (Trans. title). Statens Försögsv. Plantenk., Beretning, 197: 1-66.
- _____. 1930. (1182)
Forsøg med plantesygdomme og jordtreadhod. Tidsskr. Planteavl. 36: 291-333.
- _____, C. A. Jorgensen, and S. Rostrup. 1928. (1183)
Oversigt over sygdomme hos landbrugets og havebrugets kulturplanter i 1927. Tidsskr. Planteavl. 34: 778-836.
- Gratz, L. O. 1925. (1184)
Wire stem of cabbage. N. Y. (Cornell) Agr. Exp. Sta. Mem. 85, 1-60.
- _____. 1930. (1185)
Disease and climate as pertaining to the Florida and Maine potato sections. Phytopath. 20: 267-288.
- _____ and R. Bonde. 1927. (1186)
Infection of potato tubers by Alternaria solani in relation to storage conditions. Fla. Agr. Exp. Sta. Bull. 187, 167-182.
- Graves, A. H. 1915. (1187)
Root rot of coniferous seedlings. Phytopath. 5: 213-217.
- _____. 1924. (1188)
Disease and resistance in plants. Brooklyn Bot. Gard. Rec. 13: 27-31.
- Gray, J. 1913. (1189)
Takeall and oats. Jour. Dept. Agr. So. Aust. 17: 681-638.
- Green, S. B. 1895. (1190)
Potatoes: scab, blight and internal brown rot; apple tree sun scald; raspberry cane rust. Minn. Agr. Exp. Sta. Bull. 39, 208-213, 217-222, 230-231.
- Green, W. J. and F. H. Ballou. 1904. (1191)
Winter-killing of peach trees. Ohio Agr. Exp. Sta. Bull. 157, 115-134.
- Greene, L. 1918. (1192)
1917 and 1918 winter injury to apple trees. Iowa State Hort. Soc. Rept. 53: 119-123.
- Gregoire, A. 1925. (1193)
Bodenazidität und Zuckerrübenbau. Zeitschr. Ver. Deut. Zuck. Indus. 62: 504-510.
- Gregory, C. T. 1915. (1194)
Studies of Plasmopora viticola. Intern. Cong. Vitic. Rept., 126-150.

- _____. 1925. (1195)
Plant food and its effect on disease. *Better Crops* 4 (2): 20-21.
- Griffith, J. G. 1920. (1196)
Diseases of the Chile pepper. *N. M. Agr. Exp. Sta. Ann. Rept.* 31, 12-13.
- Griffiths, A. 1911. (1197)
Bitter pit in apples. *Agr. Gaz. Tasmania* 19: 290-291.
- Griffiths, M. A. 1924. (1198)
Physiological studies on flag smut of wheat. *Phytopath.* 14: 39. (Abst.).
- _____. 1924. (1199)
Experiments with flag smut of wheat and the causal fungus, *Urocystis tritici* Kecke. *Jour. Agr. Res.* 27: 425-449.
- Gropp. 1929. (1200)
Beobachtungen über den Zusammenhang von Bodenreaktionen und Zuckerrübenanfgang im Jahre 1929. *Deutsch Zuckerind.* 54: 1065-1068.
- Grossenbacher, J. G. 1909. (1201)
Crown-rot, arsenical poisoning and winter-injury. *N. Y. (Geneva) Agr. Exp. Sta. Tech. Bull.* 12, 367-411.
- _____. 1912. (1202)
Crown-rot of fruit trees; Field studies. *N. Y. (Geneva) Agr. Exp. Sta. Tech. Bull.* 23, 1-59.
- _____. 1915. (1203)
Some neglected phases of phytopathology. *Phytopath.* 5: 155-162.
- Groth, B. H. A. 1910. (1204)
Contribution to the study of bordeaux injury on peaches. *N. J. Agr. Exp. Sta. Bull.* 232, 1-19.
- Grouven. 1871. (1205)
Über den Einfluss der Mansfeld-Hettstedter Kupferhüttenwerke auf die umgebenden Landwirtschaftlich Kulturen. *Fühling's Landw. Zeit.* 20: 534-539.
- Guba, E. F. 1924. (1206)
Phyllosticta leaf spot, fruit blotch and canker of the apple; its etiology and control. *Phytopath.* 14: 234-237.
- _____. 1926. (1207)
Injury to glasshouse plants from hydrocyanic acid gas, following the application of copper fungicide. *Phytopath.* 16: 633-634.
- _____. and P. J. Anderson. 1919. (1208)
Phyllosticta leaf spot and damping off of snapdragons. *Phytopath.* 9: 315-325.
- Guérin, P. and C. Lormand. 1920. (1209)
Action du chlore et de diverses vapeurs sur les vegetaux. *Compt. Rend. Acad. Sci. (Paris)* 170: 401-403.
- Guerrapain, A. and A. Demolon. 1913. (1210)
Enquête et observations sur la maladie du pietin (pied noir des céréales.) *Jour. Agr. Prat.*, 2nd Ser., 26: 566-567, 627-630.
- Guillon, J. M. 1895. (1211)
Experiences sur le traitement de la chlorose. *Prog. Agr. et Vitic.* 12: 408-417.
- Guittonneau, G. 1930. (1212)
L'acide phosphorique et les maladies de carence des plantes arbustives. *Rev. Vitic.* 72: 61-68.
- Gunderson, A. J. 1919. (1213)
The pruning of winter-injured peach trees. *Ill. Agr. Exp. Sta. Bull.* 218, 381-394.
- Günther. 1927. (1214)
Beobachtungen über das Auftreten des Gelbrostes in Hessen und seine Bekämpfung durch Kalidüngung. *Ernähr. Pflanze* 23: 52-53.
- Güssow, H. T. 1908. (1215)
The predisposition of plants to parasitic diseases. *Proc. Assoc. Econ. Biol.* 1 (4): 158-170.
- _____. 1911. (1216)
Report of Dominion Botanist. *Canada Exp. Farms Rept.*, 237-274.
- _____. 1914. (1217)
Report of Dominion Botanist. *Canada Exp. Farms Rept.*, 831-849.
- _____. 1915. (1218)
Effect of wet season on wheat and potatoes. *Agr. Gaz. Canada* 2: 932-934.
- _____. 1918. (1219)
Drouth injury to McIntosh apple. *Phytopath.* 8: 490-491.

- _____. 1923. (1220)
Root asphyxiation. Canada Cent. Exp. Farms, Bot. Div. Rept., 1922, 9-10.
- _____. and I. L. Connors. 1927. (1221)
Smut diseases of cultivated plants, their cause and control. Dom. Canada Dept. Agr. Bull. 81, 1-79.
- Gustafson, F. G. 1926. (1222)
Plant distribution as affected by the hydrogen-ion concentration of the soil. Mich. Acad. Sci. Paper 6: 237-245.
- Guthrie, F. B. 1910. (1223)
Injurious substances in the soil. Agr. Gaz. N. S. Wales 21: 434-441.
- _____. and L. Cohen. 1910. (1224)
Note on the occurrence of manganese in soil, and its effect on grass. Agr. Gaz. N. S. Wales 21: 219-222.
- _____. and R. Helms. 1903. (1225)
Pot experiments to determine the limits of endurance of different farm-crops to certain injurious substances. Wheat. Agr. Gaz. N. S. Wales 14: 114-120.
- _____. and _____. 1904. (1226)
Pot experiments to determine the limits of endurance of different farm-crops to certain injurious substances. Maize. Agr. Gaz. N. S. Wales 15: 29-32.
- _____. and _____. 1905. (1227)
Pot experiments to determine the limits of endurance of different farm-crops to certain injurious substances. Barley and rice. Agr. Gaz. N. S. Wales 16: 853-860.
- Guyot, L. 1926. (1228)
Essais de lutte pratique contre la chlorose du pêcher. Rev. Path. Vég. et Ent. Agr. 13: 66-69.
- Guyot, A. L. 1930. (1229)
De l'influence de quelques opérations culturales sur le développement du piétin du Blé en 1928-1929. Rev. Path. Vég. et Ent. Agr. 17: 52-62.
- Haas, A. R. C. 1929. (1230)
Composition of walnut trees as affected by certain salts. Bot. Gaz. 87: 364-396.
- _____. 1929. (1231)
Composition of avocado trees in relation to chlorosis and tip-burn. Bot. Gaz. 87: 422-430.
- _____. 1929. (1232)
Mottle-leaf in citrus artificially produced by lithium. Bot. Gaz. 87: 630-641.
- _____. 1929. (1233)
Toxic effect of boron on fruit trees. Bot. Gaz. 88: 113-131.
- _____. 1930. (1234)
Boron as an essential element for healthy growth of citrus. Bot. Gaz. 89: 410-413.
- _____. L. D. Batchelor, and E. E. Thomas. 1928. (1235)
Yellows or little-leaf of walnut trees. Bot. Gaz. 86: 172-192.
- _____. and L. J. Klotz. 1930. (1236)
Some pathological changes induced in citrus by a deficiency of boron. Phytopath. 20: 855-856. (Abst.).
- _____. and H. S. Reed. 1927. (1237)
Relations of desiccating winds to fluctuations in ash content of citrus leaves and phenomenon of mottle-leaf. Bot. Gaz. 83: 161-172.
- _____. and E. E. Thomas. 1928. (1238)
Effect of sulfate on lemon leaves. Bot. Gaz. 86: 345-354.
- Haasis, F. W. 1922. (1239)
Frost heaving of western yellow pine seedlings. Ecology 4: 378-390.
- Haastert, H. 1927. (1240)
Ueber das Pflanzenwachstum auf sauren Böden. Zeitschr. Pflanzenernähr. u. Düng. (A) 9: 265-314.
- Haberlandt, G. 1875. (1241)
Die Abhängigkeit der Ernten von der Grösse und Verteilung der Niederschläge. Oesterr. Landw. Wochenbl., 352.
- Haenseler, C. M. 1924. (1242)
Pea root rot studies. N. J. Agr. Exp. Sta. Ann. Rept. 45, 403-414.
- _____. 1928. (1243)
Effect of soil reaction on Verticillium wilt of eggplant. N. J. Agr. Exp. Sta. Ann. Rept. 49, 267-273.
- _____. and W. H. Martin. 1925. (1244)
Arsenical injury of the peach. Phytopath. 15: 321-331.

- Hagem, O. 1910. (1245)
Untersuchungen über Norwegische Mucorineen II. Vidensk. Selsk. Skr. Moth. Naturw. Klasse, 1910, (4), 1-152.
- Hagen, M. 1895. (1246)
Flurbeschädigung durch Rauchgase. Zeitschr. Angew. Chemie 8: 279-280.
- _____. 1896. (1247)
Zur beeinträchtigung der Landwirtschaft durch Rauch von Fabrikschornsteinen. Chem. Zeit. 20: 238-239, 267-268, 283-284.
- Hahmann, C. 1929. (1248)
Schädigung an Cinerarien durch Begasung mit Cyanogas. Blumen- u. Pflanzenbau 44: 108-110.
- Hahn, G. G. 1926. (1249)
Phomopsis juniperovora and closely related strains on conifers. Phytopath. 16: 899-914.
- Hahne, J. 1926. (1250)
Untersuchungen über die Keimungsbedingungen von Tilletiasporen. Kühn-Arch. Arb. Landw. Inst., Univ. Halle, 9: 157-263.
- Hall, C. J. J. van. 1902. (1251)
Bacillus subtilis (Ehrenberg) Cohn und Bacillus vulgatus (Flügge) Mig. als Pflanzenparasiten. Centbl. Bakt. 9: 642-652.
- _____. 1910. (1252)
Sunlight and fungi. Proc. Agr. Soc. Trinidad and Tobago 10: 406-413.
- Hallenbeck, C. 1919. (1253)
Minimum temperatures sustained by apricots during March 1919, in the Pecos Valley, N. Mex. U. S. Dept. Agr., Mo. Weather Rev. 47: 240.
- Halma, F. F. and H. S. Fawcett. 1925. (1254)
Relation of growth of Helminthosporium sacchari to maintained temperatures. Phytopath. 15: 463-469.
- Halsted, B. 1888. (1255)
Downy mildews in a dry season. Iowa State Agr. Col., Bot. Dept. Bull. (Feb.), 95-102.
- Halsted, B. D. 1889. (1256)
Peronosporae and rainfall. Jour. Mycol. 5: 6-11.
- _____. 1894. (1257)
Weather versus injurious fungi. Agr. Sci. 8: 292-297.
- _____. 1895. (1258)
Field experiments with potatoes. N. J. Agr. Exp. Sta. Bull. 112, 1-20.
- _____. 1897. (1259)
Experiments in shading. N. J. Agr. Exp. Sta. Ann. Rept. 10, 344-354.
- _____. 1898. (1260)
Fungi as related to weather. N. J. Agr. Exp. Sta. Ann. Rept. 19, 359-370.
- _____. 1898. (1261)
Mycological notes. Bull. Torrey Bot. Club 25: 158-162.
- _____. 1898. (1262)
Exposure and fungous diseases. Bull. Torrey Bot. Club 25: 622-625.
- _____. 1898. (1263)
Influence of wet weather upon parasitic fungi. Proc. Amer. Assoc. Adv. Sci. 47: 416.
- _____. 1899. (1264)
The influence of wet weather upon parasitic fungi. Bull. Torrey Bot. Club 26: 381-389.
- _____. 1901-1904. (1265)
Fungi as related to weather. N. J. Agr. Exp. Sta. Ann. Rept. 21, 475-476, 1900; 22, 440-442, 1901; 23, 417-418, 1902; 24, 536-540, 1903; 25, 535-538, 1904.
- _____. 1910. (1266)
The effect of a midsummer drought upon ligneous plants. N. J. Agr. Exp. Sta. Ann. Rept. 31, 265-273.
- _____, E. J. Owen, and J. K. Shaw. 1905. (1267)
Fungi as related to weather. N. J. Agr. Exp. Sta. Ann. Rept. 26, 510-516.
- Hamburg, H. E. 1904. (1268)
Die Sommernacheröste in Schweden 1871-1900. K. Svenska Vetensk. Akad. Handl. 38 (1): 1-94.
- Hammarlund, C. 1925. (1269)
Zur Genetik, Biologie und Physiologie einiger Erysiphaceen. Hereditas, Lund, Sweden, 6: 1-126.
- _____. 1930. (1270)
Rostsvampar på Mahonia (Puccinia mirabilissima Pech och P. graminis Pers.). Bot. Not., 1930, (5), 380-407.

- Hammond, H. S. 1910. (1271)
Fertilizers and disease. Quebec Soc. Prot. Plants Ann. Rept. 2, 36-41.
- Hance, F. E. and G. R. Stewart. 1928. (1272)
The possible influence of zinc and phosphate in giving resistance to eye spot in H109 cane. Hawaiian Planters' Rec. 32: 11-14.
- Hannay, A. M. 1931. (1273)
The influence of weather on crops. 1900-1930. U. S. Dept. Agr., Misc. Publ. 118, 1-245.
- Hannig, E. 1913. (1274)
Untersuchungen über das Abstoßen von Blüten unter dem Einfluss äusserer Bedingungen. Zeitschr. Bot. 5: 417-469.
- Hansen, A. 1905. (1275)
Experimentelle Untersuchungen über die Beschädigung der Blätter durch Wind. Zeitschr. Pflanzenkr. 15: 113-114. (Abst.).
- Hansen, H. N. 1929. (1276)
Etiology of the pink-root disease of onions. Phytopath. 19: 691-704.
- Hansen, N. E. 1899. (1277)
Root-killing of apple trees. S. D. Agr. Exp. Sta. Bull. 65, 1-32.
- Hansen, T. S., et al. 1923. (1278)
A study of the damping-off disease of coniferous seedlings. Minn. Agr. Exp. Sta. Tech. Bull. 15, 1-35.
- Hansson, F. 1927. (1279)
Soil and cane composition in relation to Lahaina failure at Waipio Substation. Assoc. Hawaiian Sugar Technol. Rept. 6, 33-37.
- Hansteen, B. 1910. (1280)
Über das Verhalten der Kulturpflanzen zu den Bodensalzen. Jahrb. Wiss. Bot. 47: 289-376.
- Hanzawa, J. 1912. (1281)
Studien über einige Rhizopus-Arten. Mycol. Centbl. 1: 406-409.
- Harding, H. A. and W. J. Morse. 1909. (1282)
The bacterial soft rot of vegetables. N. Y. (Geneva) Agr. Exp. Sta. Tech. Bull. 11, 251-368.
- _____ and _____. 1910. (1283)
The bacterial soft rot of certain vegetables I. The mutual relationships of the causal organisms. Vt. Agr. Exp. Sta. Bull. 147, 243-279.
- Hardy, F. 1926. (1284)
The rôle of aluminum in soil infertility and toxicity. Jour. Agr. Sci. 16: 616-631.
- Harlay, A. and V. Harlay. 1895. (1285)
Note concernant la reaparition des champignons après la période de sécheresse de l'année 1895. Bull. Soc. Mycol. France 11: 244-246.
- Harmer, P. M. 1927. (1286)
Prevention of wind injury to crops on muck land. Mich. Agr. Exp. Sta. Circ. Bull. 103, 1-8.
- Harris, F. S. 1915. (1287)
Effect of alkali salts in soils on the germination and growth of crops. Jour. Agr. Res. 5: 1-53.
- Harris, H. C. 1929. (1288)
Soil acidity studies. Del. Agr. Exp. Sta. Bull. 162, 20.
- Harris, J. A. 1928. (1289)
Studies of elements required in only small quantities for the development of the green plant. Activities Bot. Dept., Univ. Minn., 1927, 32-40.
- Harrison, F. C. 1907. (1290)
A bacterial soft rot of the potato, caused by *Bacillus solanisaprus*. Centbl. Bakt. 17: 34-39, 120-128, 166-174, 384-395.
- Harrison, J. E. 1926. (1291)
The Jonathan apple in cool storage. Jour. Dept. Agr. Victoria 24: 31-38.
- Harrison, K. A. 1925. (1292)
Preliminary report on a disease of common bean. Quebec Soc. Prot. Plants Ann. Rept. 17, 62-69.
- Harshberger, J. W. 1921. (1293)
Open winter and plant life U. S. Dept. Agr., Mo. Weather Rev. 49: 20-21.

- Hart, H. 1926. (1294)
Factors affecting the development of flax rust, *Melampsora lini* (Pers.) Lev. *Phytopath.* 16: 185-205.
- Harter, L. L. 1909. (1295)
The control of malnutrition diseases of truck crops. *Va. Truck Exp. Sta. Bull.* 1, 1-16.
- _____. 1913. (1296)
The foot-rot of the sweet potato. *Jour. Agr. Res.* 1: 251-274.
- _____. 1916. (1297)
Sweet-potato scurf. *Jour. Agr. Res.* 5: 787-791.
- _____. 1916. (1298)
Storage rots of economic aroids. *Jour. Agr. Res.* 6: 549-571.
- _____. 1917. (1299)
Podblight of the lima bean caused by *Diaporthe phaseolorum*. *Jour. Agr. Res.* 11: 473-504.
- _____. and E. C. Field. 1913. (1300)
A dry rot of sweet potatoes caused by *Diaporthe batatas*. *U. S. Dept. Agr., Bur. Pl. Indus. Bull.* 281, 1-37.
- _____. and L. R. Jones. 1923. (1301)
Cabbage diseases. *U. S. Dept. Agr., Farmers' Bull.* 1351, 1-28.
- _____. J. L. Weimer, and J. M. R. Adams. 1918. (1302)
Sweet-potato storage rots. *Jour. Agr. Res.* 15: 337-368.
- _____. _____, and J. I. Lauritzen. 1921. (1303)
The decay of sweet potatoes (*Ipomoea batatas*) produced by different species of *Rhizopus*. *Phytopath.* 11: 279-284.
- _____. and _____. 1921. (1304)
Susceptibility of the different varieties of sweet potatoes to decay by *Rhizopus nigricans* and *Rhizopus tritici*. *Jour. Agr. Res.* 22: 511-515.
- _____. and _____. 1922. (1305)
Decay of various vegetables and fruits by different species of *Rhizopus*. *Phytopath.* 12: 205-212.
- _____. and _____. 1923. (1306)
Some physiological variations in strains of *Rhizopus nigricans*. *Jour. Agr. Res.* 26: 363-371.
- _____. _____, and J. I. Lauritzen. 1926. (1307)
The comparative susceptibility of sweet-potato varieties to black rot. *Jour. Agr. Res.* 32: 1135-1142.
- _____. and W. A. Whitney. 1926. (1308)
Influence of soil temperature and soil moisture on the infection of sweet potatoes by the black-rot fungus. *Jour. Agr. Res.* 32: 1153-1160.
- _____. and _____. 1927. (1309)
Relation of soil temperature and soil moisture to the infection of sweet potatoes by the stem-rot organisms. *Jour. Agr. Res.* 34: 435-441.
- _____. and _____. 1927. (1310)
Mottle necrosis of sweet potatoes. *Jour. Agr. Res.* 34: 893-914.
- _____. and _____. 1929. (1311)
Masking of sweet-potato mosaic. *Phytopath.* 19: 933-942.
- Hartig, R. 1874. (1312)
Wichtige Krankheiten der Waldbäume. Berlin.
- _____. 1880. (1313)
Ueber die Einwirkung des Frostes auf die Pflanzen. *Flora* 38: 177.
- _____. 1894. (1314)
Sonnenrisse und Frostrisse an der Eiche. *Zeitschr. Pflanzenkr.* 4: 352-353. (Abst.).
- _____. 1894. (1315)
Diseases of trees. (Translation). London.
- _____. 1897. (1316)
Untersuchungen über Blitzschläge in Waldbäumen. *Forstl. Naturw. Zeitschr.* 6: 97-120, 145-165, 193-206.
- Hartley, C. 1912. (1317)
Notes on the winterkilling of forest trees. *Univ. of Nebr. Forest Club Annual* 4: 39-50.
- _____. 1913. (1318)
The blights of coniferous nursery stock. *U. S. Dept. Agr., Dept. Bull.* 44, 1-21.
- _____. 1916. (1319)
Non-parasitic stem lesions on seedlings. *Phytopath.* 6: 308-309. (Abst.).

- _____. 1918. (1320)
Stem lesions caused by excessive heat. *Jour. Agr. Res.* 14: 595-604.
- _____. 1921. (1321)
Damping-off in forest nurseries. *U. S. Dept. Agr., Dept. Bull.* 934, 1-99.
- _____. 1927. (1322)
Pale dwarf disease of peanut (*Arachis hypogaea*). *Phytopath.* 17: 217-225.
- _____. and T. C. Merrill. 1915. (1323)
Storm and drought injury to foliage of ornamental trees. *Phytopath.* 5: 20-29.
- _____. and R. G. Pierce. 1917. (1324)
The control of damping-off of coniferous seedlings. *U. S. Dept. Agr., Dept. Bull.* 453, 1-32.
- _____. et al. 1918. (1325)
Seedling diseases of conifers. *Jour. Agr. Res.* 15: 521-558.
- Hartman, H., R. H. Robinson, and S. M. Zeller. 1928. (1326)
The removal of spray residue from apples and pears. *Ore. Agr. Exp. Sta. Bull.* 234, 1-38.
- _____. et al. 1929. (1327)
The occurrence and prevention of calyx injury in apples from the Hood River Valley. *Ore. Agr. Exp. Sta. Bull.* 242, 1-24.
- Hartmann, A. 1913. (1328)
Takeall. *Jour. Dept. Agr. So. Aust.* 17: 249-250.
- Hartt, C. E. 1929. (1329)
Potassium deficiency in sugar cane. *Bot. Gaz.* 88: 229-261.
- Hartwell, B. L. and F. R. Pember. 1908. (1330)
The relative toxicity of ferrous sulfate to barley and rye seedlings. *R. I. Agr. Exp. Sta. Ann. Rept.* 21, 286-294.
- _____. and _____. 1918. (1331)
Aluminum as a factor influencing the effect of acid soils on different crops. *Jour. Amer. Soc. Agron.* 10: 45-47.
- _____. and _____. 1918. (1332)
The presence of aluminum as a reason for the difference in the effect of so-called acid soil on barley and rye. *Soil Sci.* 6: 259-277.
- _____. and L. P. Howard. 1919. (1333)
Lime requirements as determined by the plant and by the chemist. *Soil Sci.* 7: 279-282.
- Harvey, E. M. and R. C. Rose. 1915. (1334)
The effects of illuminating gas on root systems. *Bot. Gaz.* 60: 27-44.
- Harvey, R. B. 1918. (1335)
Hardening process in plants and developments from frost injury. *Jour. Agr. Res.* 15: 83-111.
- _____. 1923. (1336)
Cambial temperatures of trees in winter and their relation to sun scald. *Ecology* 4: 261-265.
- _____. 1923. (1337)
Conditions for heat canker and sunscald in plants. *Minn. Horticulturist* 51: 331-333.
- _____. 1924. (1338)
Sun scald of tomatoes. *Minn. Studies in Plant Sci.* 5: 229-235.
- _____. 1925. (1339)
Conditions for heat canker and sunscald in plants. *Jour. Forestry* 23: 392-394.
- Haselhoff, E. 1892. (1340)
Ueber die schädigende Wirkung von kupfersulfat—und kupfernitrat haltigem Wasser auf Boden und Pflanzen. *Landw. Jahrb.* 21: 263-276.
- _____. 1893. (1341)
Versuche über die schädliche Wirkung von nickelhaltigem Wasser auf Pflanzen. *Landw. Jahrb.* 22: 862-867.
- _____. 1907. (1342)
Versuche über die Einwirkung von Flugstaub auf Boden und Pflanzen. *Landw. Vers. Sta.* 67: 157-206.
- _____. 1908. (1343)
Versuche über die Einwirkung von Flugstaub auf Gras. *Landw. Vers. Sta.* 69: 477-482.
- _____. 1908. (1344)
Die Beschädigung von Boden und Pflanzen durch Flugstaub. *Fühling's Landw. Zeit.* 57: 609-615.

- _____. 1913. (1845)
Ueber die Einwirkung von Borverbindungen auf das Pflanzenwachstum. Landw. Vers.
Sta. 79-80: 399-429.
- _____. and Fr. Gössel. 1904. (1846)
Über die Einwirkung von schwefeliger Säure, Zinkoxyd, Zinksulfate auf Boden und
Pflanzen. Zeitschr. Pflanzenkr. 14: 193-201.
- _____. and G. Lindau. 1903. (1847)
Die Beschädigung der Vegetation durch Rauch. Leipsig.
- Haskell, R. J. 1919. (1848)
Fusarium wilt of potato in the Hudson River Valley, New York. Phytopath. 9: 223-260.
- Haskins, H. D. 1912. (1849)
Tobacco injury due to malnutrition or over-fertilization. Mass. Agr. Exp. Sta. Ann.
Rept. 24 (2), 35-46.
- Hasper, E. 1925. (1850)
Biologie und Bekämpfung des *Cladosporium fulvum* Cooke auf *Solanum lycopersicum*.
Zeitschr. Pflanzenkr. 35: 112-118.
- Hassebrauk, K. 1930. (1851)
Über die Abhängigkeit der Rostinfektion von der Mineralsalzernährung der Getreide-
pflanze. Angew. Bot. 12: 23-35.
- Hattori, H. 1901. (1852)
Studien ueber die Einwirkung des Kupersulfats auf einige Pflanzen. Jour. Col. Sci. Imp.
Univ. (Tokyo) 15: 371-394.
- Hawkins, L. A. 1916. (1853)
The disease of potatoes known as "leak". Jour. Agr. Res. 6: 627-639.
- _____. 1927. (1854)
Orange freezing a hazard in all United States groves. U. S. Dept. Agr. Yrbk., 1926,
559-560.
- _____. and C. E. Sando. 1920. (1855)
Effect of temperature on the resistance to wounding of certain small fruits and cherries.
U. S. Dept. Agr., Dept. Bull. 830, 1-6.
- Haymaker, H. H. 1928. (1856)
Pathogenicity of two strains of the tomato-wilt fungus, *Fusarium lycopersici* Sacc. Jour.
Agr. Res. 36: 675-695.
- _____. 1928. (1857)
Relation of toxic excretory products from two strains of *Fusarium lycopersici* Sacc. to
tomato wilt. Jour. Agr. Res. 36: 697-719.
- Haywood, J. K. 1905. (1858)
Injury to vegetation by smelter fumes. U. S. Dept. Agr., Bur. Chem. Bull. 89, 1-23.
- _____. 1907. (1859)
Smelter smoke. Science 26: 476-478.
- _____. 1907. (1860)
Injury to vegetation and animal life by smelter fumes. Jour. Amer. Chem. Soc. 29:
998-1009
- _____. 1908. (1861)
Injury to vegetation and animal life by smelter wastes. U. S. Dept. Agr., Bur. Chem.
Bull. 113, 1-40.
- Headen, W. P. 1908. (1862)
Arsenical poisoning of fruit trees. Colo. Agr. Exp. Sta. Bull. 131, 1-27.
- _____. 1910. (1863)
The fixation of nitrogen in some Colorado soils. Colo. Agr. Exp. Sta. Bull. 155, 1-48.
- _____. 1910. (1864)
Arsenical poisoning of fruit trees. Colo. Agr. Exp. Sta. Bull. 157, 1-56.
- _____. 1915. (1865)
Yellow-berry in wheat: Its cause and prevention. Colo. Agr. Exp. Sta. Bull. 205, 1-38.
- _____. 1916. (1866)
A study of Colorado wheat. Colo. Agr. Exp. Sta. Bull. 219, 1-131.
- _____. 1916. (1867)
Yellow-berry in wheat: Its cause as indicated by its composition. Proc. Soc. Prom.
Agr. Sci. 36: 41-56.
- _____. 1924. (1868)
Some orchard conditions affected by arsenicals, marls and other factors. Colo. Agr.
Exp. Sta. Bull. 294, 1-31.

- Heald, F. D. 1896. (1369)
On the toxic effect of dilute solutions of acids and salts upon plants. Bot. Gaz. 22: 125-153.
- _____. 1921. (1370)
Non-parasitic diseases of the apple in Washington. Proc. Wash. State Hort. Assoc. 16: 146-158.
- _____. 1926. (1371)
Winter injury to fruit trees. Proc. Wash. State Hort. Assoc. 21: 61-71.
- _____. 1926. (1372)
Manual of plant diseases. New York.
- _____. and E. F. Gaines. 1930. (1373)
The control of bunt or stinking smut of wheat. Wash. Agr. Exp. Sta. Bull. 241, 1-30.
- _____. M. W. Gardner, and R. A. Studhalter. 1915. (1374)
Air and wind dissemination of ascospores of the chestnut-blight fungus. Jour. Agr. Res. 3: 493-526.
- _____. and D. C. George. 1918. (1375)
The wind dissemination of the spores of bunt or stinking smut of wheat. Wash. Agr. Exp. Sta. Bull. 151, 1-23.
- _____. and R. C. Walton. 1914. (1376)
The expulsion of ascospores from the perithecia of the chestnut blight fungus, *Endothia parasitica* (Murr.) And. Amer. Jour. Bot. 1: 499-521.
- _____. and H. M. Woolman. 1915. (1377)
Bunt or stinking smut of wheat. Wash. Agr. Exp. Sta. Bull. 126, 1-24.
- Hecke, L. 1898. (1378)
Untersuchungen über *Phytophthora infestans* DeBy. als Ursache der Kartoffelkrankheit. Jour. Landw. 46: 71-74, 97-142.
- _____. 1909. (1379)
Der Einfluss von Sorte und Temperatur auf dem Steinbrandbefall. Zeitschr. Landw. Versuchw. Österr. 12: 49-66.
- Hector, G. P. 1927. (1380)
Annual report of the economic botanist to the government of Bengal for the year 1925-26. Dept. Agr. Bengal Ann. Rept., 1925-26 (Append. 1), 1-4.
- Hedgecock, G. C. 1902. (1381)
The prevalence of *Alternaria* in Nebraska and Colorado during the drouth of 1901. Science 16: 136-137.
- _____. 1910. (1382)
Field studies of the crown-gall and hairy-root of the apple tree. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 186, 1-108.
- _____. 1912. (1383)
Winter-killing and smelter-injury in the forests of Montana. Torreya 12: 25-30.
- _____. 1914. (1384)
Injury by smelter smoke in southeastern Tennessee. Jour. Wash. Acad. Sci. 4: 70-71.
- Hedges, F. 1926. (1385)
Bacterial wilt of beans (*Bacterium flaccumfaciens* Hedges), including comparisons with *Bacterium phaseoli*. Phytopath. 16: 1-22.
- _____. 1928. (1386)
Bacterial halo spot of Kudzu caused by *Bacterium puerariae* Hedges. Jour. Agr. Res. 36: 419-428.
- Hedrick, U. P. 1897. (1387)
Prunes in Oregon. Gumming of the prune tree. Ore. Agr. Exp. Sta. Bull. 45, 63-75.
- _____. 1907. (1388)
Bordeaux injury. N. Y. (Geneva) Agr. Exp. Sta. Bull. 287, 105-189.
- _____. 1908. (1389)
The relation of weather to the setting of fruit; with blooming data for 866 varieties of fruit. N. Y. (Geneva) Agr. Exp. Sta. Bull. 299, 59-138.
- Heidema, J. 1923. (1390)
Beschadiging van vlas door hitte en nachtvrost. Tijdschr. Plantenziekten 29: 145-148.
- Heine, C. 1929. (1391)
Die Einwirkung des Frostes Winter 1928-29 auf Unterlage und Sorten der Süßkirschenbäume im mitteldeutschen Kirschenanbaugebiet. Obst- u. Gemüsebau 75: 188-191.
- Heinicke, A. J. 1917. (1392)
Factors influencing the abscission of flowers and partially developed fruits of the apple (*Pyrus malus* L.). N. Y. (Cornell) Agr. Exp. Sta. Bull. 393, 43-114.

- _____. 1920. (1393)
The seed content and position of the fruit as factors influencing stippen in apples. Proc. Amer. Soc. Hort. Sci. 17: 225-232.
- Heitz, K. 1927. (1394)
Fusskrankheit bei Getreide. Illus. Landw. Zeit. 47: 488-489.
- Hemenway, A. F. 1926. (1395)
Late frost injury to some trees in central Kentucky. Amer. Jour. Bot. 13: 364-366.
- Hemmi, T. 1918. (1396)
Temperature relations of some fungi causing anthracnose diseases. Sapporo Agr. and Dendr. Soc. Rept., 37-65.
- _____. 1918. (1397)
On the gloeosporiose of Caladium. Trans. Sapporo Nat. Hist. Soc. 7: 41-70.
- _____. 1920. (1398)
Beiträge zur Kenntniss der Morphologie und Physiologie der japanischen Gloeosporien. Jour. Col. Agr., Hokkaido Imp. Univ., Japan, 9 (1): 1-159.
- _____. 1923. (1399)
On the relation of temperature to the damping-off of garden-cress seedlings by *Pythium deBaryanum* and *Corticium vagum*. Phytopath. 13: 273-282.
- _____. 1930. (1400)
On the relation of soil moisture to the development of the rice blast disease. Jap. Jour. Bot. 5: 4. (Abst.).
- _____. and T. Abe. 1928. (1401)
An outline of the investigations on the seed and seedling-rot of rice caused by a water-mould *Achlya proliferans*. Jap. Jour. Bot. 4: 113-123.
- _____. and S. Endo. 1930. (1402)
On the possibility of soil infection of *Piricularia oryzae* and its relation to soil moisture. Jap. Jour. Bot. 5: 4. (Abst.).
- _____. S. Hirayama, and T. Nojima. 1929. (1403)
Studies on *Fomes ulmariae* causing the heartwood-rot of *Cryptomeria japonica*. Bot. Mag. (Tokyo) 43: 657-675.
- _____. and H. Nakamura. 1927. (1404)
Studies on the Septorioses of plants. I. Comparison of two different species of *Septoria* causing leaf-spot diseases of the cultivated chrysanthemum. Mem. Coll. Agr., Kyoto Imp. Univ., Japan, 3: 1-24.
- _____. and T. Nojima. 1928. (1405)
Studies on *Polyporus orientalis* parasitic on the roots of Pine trees. Ann. Phytopath. Soc. Japan 2: 70-88.
- _____. and K. Yakogi. 1927. (1406)
Studies on Sclerotium diseases of the rice plant. Agr. and Hort. 2: 955-1094.
- Henderson, L. F. 1904. (1407)
Tomato blight. Idaho Agr. Exp. Sta. Ann. Rept., 1903-1904, 28-32.
- Hendrick, J. 1918. (1408)
The use of lime in controlling finger-and-toe in turnips. Trans. Highland and Agr. Soc. Scot., Ser. 30, 5: 137-145.
- Hendrickson, A. H. 1924. (1409)
A chlorotic condition of pear trees. Proc. Amer. Soc. Hort. Sci. 21: 87-98.
- Hendry, G. W. 1918. (1410)
Relative effect of sodium chloride on the development of certain legumes. Jour. Amer. Soc. Agron. 10: 246-249.
- Hengl, F. and P. Reckendorfer. 1928. (1411)
Der Schwefelgehalt des Bodens und seine Beziehung zur Pflanze. Fortschr. Landw. 3: 598-600.
- Henning, E. 1894. (1412)
Några ord om olika predisposition för rost å säd. K. Landtbr. Akad. Handl. Tidskr. 33: 205-217.
- _____. 1909. (1413)
Våra viktigare landtbruksväxters disposition för och immunitet gent emot parasitsvampar. K. Landtbr. Akad. Handl. Tidskr. 48: 172-211.
- _____. 1918. (1414)
Bidrag till kannedomen om den s. k. gulspetssjukan hos sädeslagen. Med. Centralanst. Eörsöksv. Jard. Sweden 179; Bot. Avdelningen 15: 1-30.
- _____. 1919. (1415)
Anteckningar om gulrosten (*Puccinia glumarum*). K. Landtbr. Akad. Handl. Tidskr. 58: 401-418.

- _____. 1922. (1416)
 Avdelning för landtbruks botanik. K. Landtbr. Akad. Handl. Tidskr. 61: 26-32.
- _____. 1926. (1417)
 Predisponerande betingelser för svartrosthärjningar. Landtmannen 9: (51-52) 4 pp.
- Hennings, P. 1903. (1418)
 Einige beobachtungen über das Gesunden pilzkranker Pflanzen bei veränderten Kultur-
 verhältnissen. Zeitschr. Pflanzenkr. 13: 41-45.
- Henrici, M. 1927. (1419)
 Phosphormangel als Ursache von Störungen im Leben der Pflanze. Verhandl. Natur-
 forsch. Ges., Basel, 38: 316-326.
- Henry, A. W. 1923. (1420)
 The pathogenicity of *Fusarium moniliforme* Sheldon on cereals. Phytopath. 13: 52.
 (Abst.).
- _____. 1924. (1421)
 Root-rots of wheat. Minn. Agr. Exp. Sta. Tech. Bull. 22, 1-67.
- _____. and W. R. Foster. 1929. (1422)
 Leptosphaeria foot-rot of wheat in Alberta. Phytopath. 19: 689-690.
- Henslow, G. 1900. (1423)
 Injuries to plants by London fogs and smoke. Garden 57: 353-354.
- _____. 1901. (1424)
 Injuries to plants by London fog, and by engine smoke. Jour. Roy. Hort. Soc., London,
 26: 310-313.
- _____. 1912. (1425)
 On the effects of excessive drouth upon plants; or the origin of xerophytes. Jour. Roy.
 Hort. Soc. 37: 505-507.
- Heppner, M. J. 1927. (1426)
 Study of bartlett pear black-end undertaken in California. Science 65: 280-281.
- Herbert, D. A. 1922. (1427)
 Bitter pit in apples: The crushed cell theory. Phytopath. 12: 489-491.
- Herbert, F. B. 1924. (1428)
 Spray stimulation. Jour. Econ. Ent. 17: 567-572.
- Herrick, R. S. 1910. (1429)
 Thinning the Winesap. Winter and frost injury of fruit trees. Colo. Agr. Exp. Sta.
 Bull. 170, 1-19.
- Herzberg, P. 1895. (1430)
 Vergleichende Untersuchungen über Landwirthschaftlichwichtige Flugbrandarten. Beitr.
 Physiol. u. Morph. 5: 1-36.
- Hesler, L. R. 1916. (1431)
 Black rot, leaf spot, and canker of pomaceous fruits. N. Y. (Cornell) Agr. Exp. Sta.
 Bull. 379, 157-252.
- _____. 1926. (1432)
 Peach disease conditions in Ohio. Ohio Agr. Exp. Sta. Bimo. Bull. 11 (3), 110-114.
- _____. and H. H. Whetzel. 1917. (1433)
 A manual of fruit diseases. New York.
- Hesselink, E. 1927. (1434)
 Onder welke omstandigheden doet *Lophodermium pinastri* Chev. te Appelscha, Exloo en
 Oedeern schade in denneneplantigen? Tijdschr. Plantenziekt. 33: 105-124.
- Hesselman, H. 1910. (1435)
 Über den Sauerstoffgehalt des Bodenwassers und dessen Einwirkung auf die Versumpfung
 des Bodens und das Wachstum des Waldes. Meddel. Statens Skogsförsöksanst. Sweden
 7: 91-125.
- Heuser, W. 1922. (1436)
 Versuche über den Einfluss äusserer Bedingungen auf die Stärke des Steinbrandbefalls
 des Weizens. Fuhling's Landw. Zeit. 71: 81-99.
- Hewlett, C. H. 1928. (1437)
 Hot-water treatment of seed barley. Jour. Agr. New Zealand 37: 185-186.
- Hieke, F. 1928. (1438)
 Einfluss der Düngung auf die Fusskrankheiten des Getreides. Ernähr. Pflanze 24:
 411-412.
- Higgins, B. B. 1919. (1439)
 Gum formation with special reference to cankers and decays of woody plants. Ga. Agr.
 Exp. Sta. Bull. 127, 23-49.
- _____. 1923. (1440)
 The diseases of pepper. Ga. Agr. Exp. Sta. Bull. 141, 48-75.

- _____. 1924. (1441)
Winter injury to pecans. Amer. Fruit Growers' Mag. 44 (1): 13.
- _____. 1927. (1442)
Physiology and parasitism of *Sclerotium rolfsii*. Phytopath. 17: 58. (Abst.).
- Hilbig, R. 1926. (1443)
Der Einfluss der Bodenreaktion auf das Wachstum der Pflanzen. Bot. Arch. 15: 385-423.
- Hiley, W. W. 1919. (1444)
The fungal diseases of the common larch. Oxford.
- Hilgard, E. W. 1900. (1445)
Nature, value, and utilization of alkali lands. Calif. Agr. Exp. Sta. Bull. 128, 1-46.
- _____. 1906. (1446)
Marly subsoils and the chlorosis or yellowing of citrus trees. Calif. Agr. Exp. Sta. Circ. 27, 1-4.
- Hill, L. 1921. (1447)
The growth of seedlings in wind. Proc. Roy. Soc., London, 92B: 28-31.
- Hiltner, E. 1924 (1448)
Die Dörrfleckenkrankheit des Hafers und ihre Heilung durch Mangan. Landw. Jahrb. 60: 689-769.
- _____. 1926. (1449)
Störungen gesunden Pflanzenwachstums durch unausgeglichene Ernährung, unter besonderer Berücksichtigung der Dörrfleckenkrankheit des Hafers. Fortschr. Landwirtschaft 1 (11): 329-334.
- _____. 1928. (1450)
Beobachtungen über die Herz- und Trochenfäule der Rüben—eine Umfrage. Prakt. Blätter f. Pflanzenbau u. Pflanzenschutz 6: 214-218.
- Hiltner, L. 1912. (1451)
Über den Einfluss der Ernährung und der Witterung auf das Auftreten pilzlicher und tierischer Pflanzenschädlinge. Jahrb. Deut. Landw. Ges. 27: 156-169.
- _____. 1913. (1452)
Über die diesjährigen Answinterungsschäden bei Klee und Roggen. Prakt. Blätter Pflanzenbau u. Schutz 16: 54-56.
- _____. 1914. (1453)
Beobachtungen und Untersuchungen über die sog. Dörrfleckenkrankheit des Hafers (Hafersucht). Prakt. Blätter Pflanzenbau u. Schutz 17: 28-41.
- _____. 1914. (1454)
Neuere Beobachtungen über den Rostbefall des Wintergetreides. Prakt. Blätter Pflanzenbau u. Schutz 17: 81-84.
- _____. and F. Lang. 1922. (1455)
Ueber den Einfluss der Düngung, insbesondere mit Kalkstickstoff, auf die Stärke des Brandbefalls des Getreides. Mitt. Deut. Landw. Ges. 37: 253-257.
- Hintikka, T. J. 1929. (1456)
Distribution of potato wart and certain climatic factors of the infested regions. (Trans. title). Valtion Maatalovskoet. Julk., Helsinki, 23: 1-103.
- Hirayama, S. 1930. (1457)
Studies on *Polystictus sanguineus*. Jap. Jour. Bot. 5: 32. (Abst.).
- Hitchcock, A. S. and M. A. Carleton. 1893. (1458)
Preliminary report on rusts of grain. Kan. Agr. Exp. Sta. Bull. 38, 1-12.
- _____. and J. B. S. Norton. 1896. (1459)
Corn smut. Kan. Agr. Exp. Sta. Bull. 62, 169-212.
- Hiura, M. 1929. (1460)
Studies on some downy mildews of agricultural plants. II. Relation of meteorological conditions to the downy mildew of cucumber. (Japanese). Gifu Imp. Col. Agr. Res. Bull. 6, 1-58.
- _____. 1929. (1461)
Studies on some downy mildews of agricultural plants. I. On *Sclerospora graminicola* (Sacc.), the causal fungus of the downy mildew of Italian Millet (the fourth note). Byochu-Gai Zasshi 16 (9): 5 pp.
- _____. 1929. (1462)
Studies on some downy mildews of agricultural plants. III. On the downy mildew of spinach. Agr. and Hort. 4: 10-22.
- _____. 1929. (1463)
Studies on some downy mildews of agricultural plants. I. On *Sclerospora graminicola* (Sacc.) Schroet., the causal fungus of the downy mildew of Italian millet (the second preliminary note). Jour. Soc. Agr. Sci. Japan, 1929, 245-253.

- _____. 1930. (1464)
A simple method for the germination of oospores of *Sclerospora graminicola*. Science
72: 95.
- _____. 1930. (1465)
Further note on the downy mildew of *Setaria italica*. (Japanese). Byochu-Gai Zasshi
17: 8 pp.
- _____. 1930. (1466)
Studies on some downy mildews of agricultural plants. IV. On the downy mildew of
Welsh onion. (Report II). Agr. and Hort. 5: 1008-1014.
- Hoagland, D. R. 1917. (1467)
The effect of hydrogen and hydroxyl ion concentration on the growth of barley seedlings.
Soil Sci. 3: 547-560.
- _____. 1928. (1468)
Recent soil investigations in California. Amer. Fertilizer 68 (2): 34, 54, 57, 58, 60, 62.
- Hockey, J. F. 1928. (1469)
Report of the Dominion Laboratory of Plant Pathology, Kentville, N. S. Canada Dept.
Agr., Div. Bot. Rept., 1927, 139-156.
- Hodgson, R. W. 1917. (1470)
The pomegranate. Calif. Agr. Exp. Sta. Bull. 276, 163-192.
- _____. 1917. (1471)
Some abnormal water relations in citrus trees of the arid Southwest and their possible
significance. Univ. Calif. Publ. Agr. Sci. 3: 37-54.
- _____. 1917. (1472)
Citrus blast, a new bacterial disease. Calif. State Comm. Hort. Mo. Bull. 6, 229-233.
- Hoerner, G. R. 1921. (1473)
Germination of aeciospores, urediniospores, and teliospores of *Puccinia coronata*. Bot.
Gaz. 72: 173-177.
- Hoffer, G. N. and R. H. Carr. 1923. (1474)
Accumulation of iron and aluminum compounds in corn plants and its probable relation
to root rots. Jour. Agr. Res. 23: 801-823.
- _____. and J. F. Trost. 1923. (1475)
The accumulation of iron and aluminum compounds in corn plants and its probable relation
to root rots. II. Jour. Amer. Soc. Agron. 15: 323-331.
- Hoffman, H. 1860. (1476)
Untersuchungen über die Keimung der Pilzsporen. Jahrb. Wiss. Bot. 2: 267-337.
- Holbert, J. R. and G. N. Hoffer. 1920. (1477)
Control of the root, stalk, and ear rot diseases of corn. U. S. Dept. Agr., Farmers' Bull.
1176, 1-24.
- _____. et al. 1924. (1478)
Corn root, stalk, and ear rot diseases, and their control thru seed selection and breeding.
Ill. Agr. Exp. Sta. Bull. 255, 235-478.
- Holder-Egger. 1927. (1479)
Wasser- und Kälteschäden im Gartenbau. Kleintierz. u. Gartenb. 52: 474.
- Hole, R. S. 1916. (1480)
Importance of soil aeration in forestry. Agr. Jour. India (Spec. Sci. Cong. No.), 27-32.
- _____. 1918. (1481)
Recent investigations on soil-aeration II. With special reference to forestry. Agr. Jour.
India 13: 430-440.
- _____. 1927. (1482)
Mortality of spruce in the Jaunsar Forests, United Provinces. Indian Forester 53:
434-443, 483-493.
- _____. and P. Singh. 1914. (1483)
Soil composition, soil-moisture, soil-aeration. Indian Forest Rec. 5 (4): 1-40.
- _____. and _____. 1916. (1484)
Ecology of Sal (*Shorea robusta*). III. Soil-aeration and water-cultures. Indian Forest
Rec. 5: 87-102.
- Holmes, F. O. 1928. (1485)
Accuracy in quantitative work with tobacco mosaic virus. Bot. Gaz. 86: 66-81.
- Holmes, J. A. et al. 1915. (1486)
Bibliography on the effect of sulfur dioxide on vegetation and animal life. U. S. Dept.
Int., Bur. Mines Bull. 98, 1-528.
- Holmes, J. S. 1921. (1487)
Damage to forests by hail in North Carolina. U. S. Dept. Agr., Mo. Weather Rev. 49:
333.

- Hooper, C. H. 1925. (1488)
Apple-leaf scorch. *Gardeners' Chron.* 77: 419.
- Hopkins, E. F. 1921. (1489)
Growth and germination of *Gibberella saubinetii* at varying hydrogen-ion concentrations.
Phytopath. 11: 36. (Abst.).
- _____. 1921. (1490)
Hydrogen-ion concentration of the soil and seedling infection by *Gibberella saubinetii*.
Phytopath. 11: 36-37. (Abst.).
- _____. 1922. (1491)
Wheat scab. *Mo. Agr. Exp. Sta. Bull.* 197, 48.
- _____. 1922. (1492)
Hydrogen-ion concentration in its relation to wheat scab. *Amer. Jour. Bot.* 9: 159-179.
- _____. and F. B. Wann. 1926. (1493)
Relation of H-ion concentration to growth of *Chlorella* and to the availability of iron.
Bot. Gaz. 81: 353-376.
- _____. and _____. 1927. (1494)
Iron requirement of *Chlorella*. *Bot. Gaz.* 84: 407-427.
- Hopkins, J. C. F. 1928. (1495)
Frenching of tobacco. *Rhodesia Agr. Jour.* 25: 588-590.
- _____. 1928. (1496)
Preliminary experiments on the control of white mould of tobacco. *Rhodesia Agr. Jour.* 25: 1342-1348.
- _____. 1929. (1497)
Blackfire of tobacco. *Rhodesia Agr. Jour.* 26: 371-373.
- _____. 1930. (1498)
Field control of frenching in tobacco. *Rhodesia Agr. Jour.* 27: 581-586.
- Hori, S. 1901. (1499)
Foot rot (take-all) disease of barley, wheat, and rye. (Japanese). *Imp. Cent. Agr. Exp. Sta. Japan, Tech. Rept.* 18: 35-65.
- Horne, A. S. 1912-13. (1500)
Bruise in potato. *Jour. Roy. Hort. Soc., London*, 38: 40-50.
- _____. 1927. (1501)
Factors affecting the internal resistance of apple tissues to fungal attack. *Dept. Sci. and Ind. Res., Food Invest. Bd. Rept. Great Britain, 1925-26*, 52-53.
- _____. 1930. (1502)
Biological work. *Dept. Sci. and Indus. Res., Food Invest. Board Rept. Great Britain, 1929*, 125-140.
- Horton, H. E. 1906. (1503)
A contribution to the bibliography of the use of sulfate of iron in agriculture. Chicago.
- Hosseus, C. C. 1911. (1504)
Edaphische Wirkungen des Kalkes auf die Vegetation tropischer Karren und Karrenfelder. *Bot. Jahrb.* 45: 661-669.
- Hotson, J. W. 1916. (1505)
Observations on fire blight in the Yakima Valley, Washington. *Phytopath.* 6: 288-292.
- _____. 1920. (1506)
Collar-rot of apple trees in the Yakima Valley. *Phytopath.* 10: 465-486.
- Hotter, E. 1890. (1507)
Ueber das Vorkommen des Bors im Pflanzenreich und dessen physiologische Bedeutung. *Landw. Vers. Sta.* 37: 437-458.
- Houdaille, F. and Mazade. 1894. (1508)
Influence de la distribution de l'humidité dans le sol sur le développement de la chlorose de la vigne en sol calcaire. *Compt. Rend. Acad. Sci. (Paris)* 119: 304-307.
- Houser, T. 1920. (1509)
Root rot of tobacco. *Ohio Agr. Exp. Sta. Bimo. Bull.* 5 (8): 232-234.
- Houtman, P. W. 1916. (1510)
Lodging in sugar cane, and its prevention. *Arch. Suikerindus. Nederland., Indië*, 24: 637-665.
- Howard, A. 1914. (1511)
The development of the fruit industry of Baluchistan. *Pusa Agr. Res. Inst. India Rept.*, 1913-14, 43-46.
- _____. 1916. (1512)
Soil aeration in agriculture. *Pusa Agr. Res. Inst. India Bull.* 61, 1-22.

- _____. 1916. (1513)
The importance of soil ventilation on the alluvium. Agr. Jour. India (Spec. Sci. Cong. No.), 46-52.
- _____. 1918. (1514)
Recent investigations in soil-aeration. Indian Forester 44: 187-212.
- _____. 1921. (1515)
The influence of soil factors on disease resistance. Ann. Appl. Biol. 7: 373-389.
- _____. 1921. (1516)
Disease in plants. Agr. Jour. India 16: 626-637.
- _____. 1924. (1517)
The effect of grass on trees. Proc. Roy. Soc., London, 97B: 284-321.
- _____. and R. S. Hole. 1918. (1518)
Recent investigations in soil aeration. Agr. Jour. India 8: 416-440.
- _____. and G. L. C. Howard. 1915. (1519)
Soil ventilation. Pusa Agr. Res. Inst. India Bull. 52, 1-35.
- _____. and _____. 1920. (1520)
Some aspects of the indigo industry in Bihar. Mem. Dept. Agr. India, Bot. Ser. 11 (1): 1-35.
- Howard, R. F. 1924. (1521)
The relation of low temperatures to root injury of the apple. Nebr. Agr. Exp. Sta. Bull. 199, 1-32.
- Howard, W. L. 1920. (1522)
An old disease in a new place. Proc. Amer. Soc. Hort. Sci. 17: 102-104.
- Howell, J. K. 1890. (1523)
The clover rust (*Uromyces trifolii*) (Alb. and Schw.) (Wint.). N. Y. (Cornell) Agr. Exp. Sta. Bull. 24, 129-139.
- Howitt, J. E. 1925. (1524)
A review of our knowledge concerning immunity and resistance in plants. Quebec Soc. Prot. Plants Ann. Rept. 16, 9-24.
- _____. 1927. (1525)
The underlying causes of plant diseases. Ont. Agr. Col. Rev. 39: 265-268.
- _____. and W. G. Evans. 1926. (1526)
Preliminary report of some observations on ascospore discharge and dispersal of conidia of *Venturia inaequalis* (Cooke) Winter. Phytopath. 16: 559-563.
- _____. and _____. 1926. (1527)
Some observations on ascospore discharge and the dispersal of conidia of *Venturia inaequalis* (Cooke) Winter. Phytopath. 16: 756. (Abst.).
- Howlett, F. S. 1926. (1528)
Frost injury to the apple. Ohio Agr. Exp. Sta. Bimo. Bull. 11 (3): 104-109.
- _____. and C. May. 1929. (1529)
The relation of lime-sulfur sprays to the abscission of young apples. Phytopath. 19: 1001-1007.
- Huber, B. 1926. (1530)
Weitere Beobachtungen über verschiedene Dürresistenzen bei Licht- und Schattenpflanzen. Ber. Deutsch. Bot. Ges. 43: 551-559.
- Huber, G. A. 1930. (1531)
The Aspergilli and their relation to decay in apples. Jour. Agr. Res. 41: 801-817.
- Hubert, E. E. 1918. (1532)
A report on the red belt injury of forest trees. Mont. State Forester, Bien. Rept. 5, 33-38.
- Hudig, J. 1923. (1533)
Diseases of crops in alkaline and sour soils. Rept. Intern. Conf. Phytopath. and Econ. Ent., Wageningen, 136-141.
- _____. 1924. (1534)
Über die Kalkbedürftigkeit unserer Sandböden. Deutsche Landw. Presse 51: 218-219.
- Hülsemann. 1926. (1535)
Der Einfluss des Kalis auf Krankheitserscheinungen der Kulturpflanzen. Ernähr. Pflanze 22: 217-219.
- Humbert, J. G. 1918. (1536)
Tomato diseases in Ohio. Ohio Agr. Exp. Sta. Bull. 321, 157-196.
- Hume, H. H. 1900. (1537)
Some citrus troubles. Fla. Agr. Exp. Sta. Bull. 53, 145-178.

- Humphrey, C. J. 1923. (1538)
Decay of lumber and building timber due to *Poria incrassata* (B. & C.) Burt. *Mycologia* 15: 258-275.
- and R. M. Fleming. 1915. (1539)
The toxicity to fungi of various oils and salts, particularly those used in food preservation. U. S. Dept. Agr., Dept. Bull. 227, 1-38.
- Humphrey, H. B. 1914. (1540)
Studies on the relation of certain species of *Fusarium* to tomato blight of the Pacific Northwest. Wash. Agr. Exp. Sta. Bull. 115, 1-22.
- , C. W. Hungerford, and A. G. Johnson. 1924. (1541)
Stripe rust (*Puccinia glumarum*) of cereals and grasses in the United States. *Jour. Agr. Res.* 29: 209-227.
- Hunger, F. W. T. 1905. (1542)
Untersuchungen und Betrachtungen über die Mosaikkrankheit der Tabakspflanze. *Zeitschr. Pflanzenkr.* 15: 257-311.
- Hungerford, C. W. 1922. (1543)
The relation of soil moisture and soil temperature to bunt infection in wheat. *Phytopath.* 12: 337-352.
- and A. E. Wade. 1920. (1544)
Relation between soil moisture and bunt infection in wheat. *Phytopath.* 10: 53. (Abst.).
- Hunter, C. and E. M. Rich. 1925. (1545)
The effect of artificial aeration of the soil on *Impatiens balsamina* L. *New Phytol.* 24: 257-271.
- Hurd, A. M. 1920. (1546)
Injury to seed wheat resulting from drying after disinfection with formaldehyde. *Jour. Agr. Res.* 20: 209-244.
- 1921. (1547)
Seed-coat injury and viability of seeds of wheat and barley as factors in susceptibility to molds and fungicides. *Jour. Agr. Res.* 21: 99-122.
- 1923. (1548)
Hydrogen-ion concentration and varietal resistance of wheat to stem rust and other diseases. *Jour. Agr. Res.* 23: 373-386.
- 1924. (1549)
The course of acidity changes during the growth period of wheat with special reference to stem-rust resistance. *Jour. Agr. Res.* 27: 725-735.
- Hursh, C. R. 1922. (1550)
The relation of temperature and hydrogen-ion concentration to urediniospore germination of biologic forms of stem rust of wheat. *Phytopath.* 12: 353-361.
- 1924. (1551)
Morphological and physiological studies on the resistance of wheat to *Puccinia graminis tritici* Erikss. and Henn. *Jour. Agr. Res.* 27: 381-411.
- Hurst, R. R. 1928. (1552)
Control of wheat smut [*Ustilago tritici* (Pers.) Jens.] in the Huron variety, at Charlottetown, P. E. I. Canada Dept. Agr., Div. Bot. Rept., 1927, 116-117.
- Husson, C. 1876. (1553)
Action de la fumée des fours à chaux sur les vignes. *Compt. Rend. Acad. Sci. (Paris)* 82: 1218-1221.
- Hutchins, L. M. 1926. (1554)
Studies on the oxygen-supplying power of the soil together with quantitative observations on the oxygen-supplying power requisite for seed germination. *Plant Physiol.* 1: 95-150.
- and B. E. Livingston. 1923. (1555)
Oxygen-supplying power of the soil as indicated by color changes in alkaline pyrogallol solution. *Jour. Agr. Res.* 25: 133-140.
- Hutchinson, C. M. and N. V. Joshi. 1915. (1556)
Bacterial rot of stored potato tubers. *Mem. Dept. Agr. India, Bact. Ser.* 1 (5): 113-135.
- Hutchinson, W. G. 1929. (1557)
An undescribed species of *Macrophoma* and of *Volutella* occurring on *Pachysandra terminalis*. *Mycologia* 21: 131-142.
- Ikata, S. 1930. (1558)
Studien über die Rostkrankheit japanischer Minze. *Jap. Jour. Bot.* 5: 5-6. (Abst.).

- Immer, F. R. and J. J. Christensen. 1928. (1559)
Influence of environmental factors on the seasonal prevalence of corn smut. *Phytopath.*
18: 589-598.
- Ireland, J. C. 1927. (1560)
Controlling influences in corn rot problems. *Bot. Gaz.* 86: 249-269.
- Ishiyama, S. 1928. (1561)
Bacterial leaf blight of the rice plant. *Proc. Third Pan-Pacific Sci. Cong.* (Tokyo),
1926, 2112.
- Istvánffi, G. 1904. (1563)
Ueber die Lebensfähigkeit der *Botrytis*, *Monilia* und *Coniothyrium* Sporen. *Centbl.*
Bakt. 11: 584-586. (Abst.).
- _____. 1914. (1564)
The conditions determining the outbreak of vine mildew in Hungary. *Intern. Rev. Sci.*
and *Pract. Agr.*, Rome, 5: 1242-1245.
- _____. and G. Pálkás. 1912. (1565)
Infectionversuche mit *Peronospora*. *Centbl. Bakt.* 32: 551-564.
- _____. and _____. 1913. (1566)
Etudes sur le mildiou de la vigne. *Ann. Inst. Cent. Ampeolo Roy. Hongrois* 4: 1-125.
- _____. and _____. 1913. (1567)
Etudes sur le mildiou de la vigne. *Rev. Vitic.* 40: 481-484, 509-513, 540-543.
- _____. and F. Savoly. 1911. (1568)
Entre le temps et le mildiou en Hongrie. *Rev. Vitic.* 35: 613-621.
- Ivanoff, B. 1907. (1569)
Untersuchungen über den Einfluss des Standortes auf den Entwicklungsgang und den
Peridienbau der Uredineen. *Centbl. Bakt.* 18: 265-288, 470-480, 655-672.
- Jackson, A. B. 1927. (1570)
The *Fusarium* wilt of China asters. *Sci. Agr.* 7: 233-247.
- Jacob, H. E. 1929. (1571)
Powdery mildew of the grape and its control in California. *Calif. Agr. Exten. Serv.*
Circ. 31, 1-18.
- Jacobson, H. G. M. and T. R. Swanback. 1929. (1572)
Manganese toxicity in tobacco. *Science* 70: 283-284.
- Jaczewski, A. v. 1910. (1573)
Studien über das Verhalten des Schwarzrostes des Getreides in Russland. *Zeitschr.*
Pflanzenkr. 20: 321-359.
- Jäger, G. 1864. (1574)
Ueber die Wirkung der Arseniks auf Pflanzen. Stuttgart.
- Jamieson, C. O. 1915. (1575)
Phoma destructiva, the cause of a fruit rot of the tomato. *Jour. Agr. Res.* 4: 1-20.
- Jankowska, K. 1930. (1576)
Observations on the greenhouse fungus (*Monilopsis adersholdii* Ruhl.). (Trans. title).
Mém. Inst. Nat. Polonais d'Econ. Rur. à Putawy 11: 61-69.
- Janson, A. 1905. (1577)
Kalidungung gegen die Spitzendürre. *Prakt. R. Obst- u. Gartenbau* 20 (38): 342.
- _____. 1927. (1578)
Gehölz-Schädigungen durch Rauch und Russ. *Prakt. R. Obst- u. Gartenbau* 42: 339-340.
- Janssen, G. and R. P. Bartholomew. 1929. (1579)
The translocation of potassium in tomato plants and its relation to their carbohydrate
and nitrogen distribution. *Jour. Agr. Res.* 38: 447-465.
- Janssen, J. J. 1929. (1580)
Invloed der bemesting op de gezondheid van de Aardappel. *Tijdschr. o. Plantenziekten*
35: 119-151.
- Jarrett, P. H. 1930. (1581)
Streak—a virus disease of tomatoes. *Ann. Appl. Biol.* 17: 248-259.
- Jehle, R. A. 1914. (1582)
Peach cankers and their treatment. *N. Y. (Cornell) Agr. Exp. Sta. Circ.* 26, 1129-1140.
- _____. 1929. (1583)
Problems in the control of apple scab. *Trans. Penin. Hort. Soc.* 19: 27-30.
- Jenkin, T. J. and K. Sampson. 1921. (1584)
Rust resistance trials with wheat. *Welsh Plant Breeding Sta., Ser. C, Bull.* 1, 41-49.
- Jennings, O. E. 1923. (1585)
The relation of smoke, fumes, and dust to the vegetation of the industrial district of
Pittsburgh. *Trillia* 7: 27-38.

- Jensen, C. A. 1918. (1586)
June drop and its relation to the weather. *Calif. Citrogr.* 3: 255, 277.
- Jensen, G. H. 1907. (1587)
Toxic limits and stimulation effects of some salts and poisons on wheat. *Bot. Gaz.* 43: 11-44.
- Jensen, H. J. 1928. (1588)
Potato necrosis. *Wash. Agr. Exp. Sta. Bull.* 229, 57.
- Jensen, H. L. 1930. (1589)
Notes on a cellulose-decomposing soil fungus of an unusual character. *Proc. Linn. Soc. N. S. Wales* 15: 699-707.
- Jensen, I. J. 1925. (1590)
Winter wheat studies in Montana with special reference to winter killing. *Jour. Amer. Soc. Agron.* 17: 630.
- Jensen, J. L. 1887. (1591)
Moyens de combattre et de détruire le *Peronospora* de la pomme de terre. *Mem. Soc. Nat. Agr. France* 131: 31-156.
- _____. 1888. (1592)
Om Kornsorternes Brand. (Anden Meddelelse). Kjøbenhavn.
- Johann, H. 1928. (1593)
Penicillium injury to corn seedlings. *Phytopath.* 18: 239-242.
- _____, J. G. Dickson, and G. Wineland. 1923. (1594)
Relation of environment to infection of corn seedlings by *Diplodia zeae* (Schw.) Lev. *Phytopath.* 13: 52-53. (Abst.).
- _____, J. R. Holbert, and J. G. Dickson. 1926. (1595)
A *Pythium* seedling blight and root rot of dent corn. *Phytopath.* 16: 85. (Abst.).
- _____, _____, and _____. 1928. (1596)
A *Pythium* seedling blight and root rot of dent corn. *Jour. Agr. Res.* 37: 443-464.
- Johnson, A. G. 1911. (1597)
Further notes on timothy rust. *Proc. Ind. Acad. Sci.*, 1910, 203-204.
- _____. 1914. (1598)
Experiments on the control of certain barley diseases. *Phytopath.* 4: 46. (Abst.).
- _____, and J. G. Dickson. 1921. (1599)
Wheat scab and its control. *U. S. Dept. Agr., Farmers' Bull.* 1224, 1-16.
- Johnson, E. C. 1910. (1600)
Facts contributing to the explanation of grain rust epidemics. *Science* 32: 256. (Abst.).
- _____. 1912. (1601)
Cardinal temperatures for the germination of uredospores of cereal rusts. *Phytopath.* 2: 47-48. (Abst.).
- Johnson, H. W. 1923. (1602)
Relationships between hydrogen ion, hydroxyl ion and salt concentrations and the growth of seven soil molds. *Iowa Agr. Exp. Sta. Res. Bull.* 76, 305-344.
- Johnson, J. 1914. (1603)
The control of damping-off in plant beds. *Wis. Agr. Exp. Sta. Res. Bull.* 31, 29-61.
- _____. 1914. (1604)
Black rot, shed burn, and stem rot of tobacco. *Wis. Agr. Exp. Sta. Res. Bull.* 32, 63-86.
- _____. 1921. (1605)
The relation of air temperature to certain plant diseases. *Phytopath.* 11: 446-458.
- _____. 1921. (1606)
Fusarium-wilt of tobacco. *Jour. Agr. Res.* 20: 515-535.
- _____. 1922. (1607)
Tobacco diseases. *Wis. Agr. Exp. Sta. Bull.* 339, 45-48.
- _____. 1922. (1608)
Late potato blight kills in warm weather. *Wis. Agr. Exp. Sta. Bull.* 339, 48.
- _____. 1922. (1609)
Non-parasitic leaf spots of tobacco. *Phytopath.* 12: 52. (Abst.).
- _____. 1922. (1610)
The relation of air temperature to the mosaic disease of potatoes and other plants. *Phytopath.* 12: 438-440.
- _____. 1923. (1611)
Potato mosaic influenced by temperature. *Wis. Agr. Exp. Sta. Bull.* 352, 58-59.
- _____. 1923. (1612)
A bacterial leafspot of tobacco. *Jour. Agr. Res.* 23: 481-493.

- _____. 1924. (1613)
Tobacco diseases and their control. U. S. Dept. Agr., Dept. Bull. 1256, 1-56.
- _____. 1926. (1614)
The attenuation of plant viruses and the inactivating influence of oxygen. Science 64: 210.
- _____. 1927. (1615)
The classification of plant viruses. Wis. Agr. Exp. Sta. Res. Bull. 76, 1-16.
- _____. 1928. (1616)
Further studies on the attenuation of plant viruses. Phytopath. 18: 156. (Abst.).
- _____. 1929. (1617)
The classification of certain virus diseases of the potato. Wis. Agr. Exp. Sta. Res. Bull. 87, 1-24.
- _____. 1929. (1618)
'Road-oil' injury to tobacco and other crops. Wis. Agr. Exp. Sta. Bull. 405, 113-114.
- _____. 1930. (1619)
Breeding tobacco for resistance to Thielavia root rot. U. S. Dept. Agr., Tech. Bull. 175, 1-20.
- _____. and R. E. Hartman. 1918. (1620)
Influence of soil temperature on Thielavia root-rot. Phytopath. 8: 77. (Abst.).
- _____. and _____. 1919. (1621)
Influence of soil environment on the root-rot of tobacco. Jour. Agr. Res. 17: 41-86.
- _____. and H. F. Murwin. 1925. (1622)
Experiments on the control of wildfire of tobacco. Wis. Agr. Exp. Sta. Res. Bull. 62, 1-85.
- _____. C. M. Slagg, and H. F. Murwin. 1926. (1623)
The brown root rot of tobacco and other plants. U. S. Dept. Agr., Dept. Bull. 1410, 1-29.
- Johnson, M. O. 1916. (1624)
The spraying of yellow pineapple plants on manganese soils with sulfate solutions. Hawaii Agr. Exp. Sta. Press Bull. 51, 1-11.
- _____. 1924. (1625)
Manganese chlorosis of pineapples: Its cause and control. Hawaii Agr. Exp. Sta. Bull. 52, 1-38.
- _____. 1928. (1626)
Control of chlorosis of the pineapple and other plants. Jour. Indus. and Engin. Chem. 20: 724-725.
- Johnson, T. 1925. (1627)
Studies on pathogenicity and physiology of Helminthosporium gramineum Rab. Phytopath. 15: 797-804.
- _____. and M. Newton. 1928. (1628)
The occurrence of yellow stripe rust in western Canada. Phytopath. 18: 481. (Abst.).
- Johnston, C. O. 1924. (1629)
Wheat bunt investigations in Kansas. Phytopath. 14: 37. (Abst.).
- _____. 1927. (1630)
Effects of soil moisture and temperature and of dehulling on the infection of oats by loose and covered smuts. Phytopath. 17: 31-36.
- _____. and L. E. Melchers. 1929. (1631)
Greenhouse studies on the relation of age of wheat plants to infection by Puccinia triticina. Jour. Agr. Res. 38: 147-157.
- Johnston, E. S. 1921. (1632)
The freezing of peach buds. U. S. Dept. Agr., Mo. Weather Rev. 49: 231.
- _____. and W. H. Dore. 1929. (1633)
The influence of boron on the chemical composition and growth of the tomato plant. Plant Physiol. 4: 31-62.
- _____. and P. L. Fisher. 1930. (1634)
The essential nature of boron to the growth and fruiting of the tomato. Plant Physiol. 5: 387-392.
- Johnston, J. R. 1912. (1635)
The history and cause of the coconut bud-rot. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 228, 1-175.
- Jones, D. H. 1909. (1636)
Bacterial blight of apple, pear and quince trees. Ont. Dept. Agr. Bull. 176, 1-63.

- Jones, E. S. 1922. (1637)
Relation of temperature, soil moisture, and oxygen to the germination of the spore of *Ustilago avenae*. *Phytopath.* 12: 45. (Abst.).
- _____. 1923. (1638)
Influence of temperature, moisture, and oxygen on spore germination of *Ustilago avenae*. *Jour. Agr. Res.* 24: 577-591.
- _____. 1923. (1639)
Influence of temperature on the spore germination of *Ustilago zeae*. *Jour. Agr. Res.* 24: 593-597.
- Jones, F. R. 1918. (1640)
Yellow-leafblotch of alfalfa caused by the fungus *Pyrenopeziza medicaginis*. *Jour. Agr. Res.* 13: 307-329.
- _____. 1919. (1641)
The leaf-spot diseases of alfalfa and red clover caused by the fungi *Pseudopeziza medicaginis* and *Pseudopeziza trifolii*, respectively. U. S. Dept. Agr., Dept. Bull. 759, 1-38.
- _____. 1923. (1642)
Stem and rootrot of peas in the United States caused by species of *Fusarium*. *Jour. Agr. Res.* 26: 459-475.
- _____. and C. Drechsler. 1925. (1643)
Root rot of peas in the United States caused by *Aphanomyces euteiches*. (n. sp.). *Jour. Agr. Res.* 30: 293-325.
- _____. and M. B. Linford. 1925. (1644)
Pea disease survey in Wisconsin. *Wis. Agr. Exp. Sta. Res. Bull.* 64, 1-31.
- _____. and L. McCulloch. 1926. (1645)
A bacterial wilt and root rot of alfalfa caused by *Aplanobacter insidiosum* L. McC. *Jour. Agr. Res.* 33: 493-521.
- _____. and R. E. Vaughan. 1921. (1646)
Anthracnose of the garden pea. *Phytopath.* 11: 500-503.
- _____. and J. L. Weimer. 1928. (1647)
Bacterial wilt and winter injury to alfalfa. U. S. Dept. Agr. Circ. 39, 1-8.
- Jones, G. H. and T. G. Mason. 1926. (1648)
On two obscure diseases of cotton. *Ann. Bot.* 40: 759-772.
- Jones, H. L. 1927. (1649)
Manurial and stripe disease control experiment on tomatoes, Rhyl. *Welsh Jour. Agr.* 3: 296-297.
- Jones, J. P. 1927. (1650)
Influence of cropping systems on root-rots of tobacco. *Jour. Amer. Soc. Agron.* 20: 679-685.
- _____. 1928. (1651)
The influence of cropping systems and fertilizers on black and brown root rot of tobacco. *Phytopath.* 18: 131. (Abst.).
- _____. 1929. (1652)
A cause of a chlorosis of corn. *Mass. Agr. Exp. Sta. Bull.* 247, 304.
- _____. 1929. (1653)
The effect of other crops on tobacco. *Jour. Amer. Soc. Agron.* 21: 118-129.
- _____. 1929. (1654)
Deficiency of magnesium the cause of a chlorosis in corn. *Jour. Agr. Res.* 39: 873-892.
- Jones, J. S. and G. A. Mitchell. 1926. (1655)
The cause and control of yellow berry in turkey wheat grown under dry-farming conditions. *Jour. Agr. Res.* 33: 281-292.
- Jones, L. H. 1930. (1666)
Department of Botany. *Mass. Agr. Exp. Sta. Bull.* 260, 340-344.
- Jones, L. K. 1924. (1667)
Anthracnose of cane fruits and its control on black raspberries in Wisconsin. *Wis. Agr. Exp. Sta. Res. Bull.* 59, 1-26.
- Jones, L. R. 1895. (1668)
Relation of the late blight of potato to the weather. *Vt. Agr. Exp. Sta. Ann. Rept.* 9, 66-71.
- _____. 1895. (1669)
Potato blights and fungicides. *Vt. Agr. Exp. Sta. Bull.* 49, 79-100.
- _____. 1897. (1670)
Apple scald. *Vt. Agr. Exp. Sta. Ann. Rept.* 10, 55-59.

- _____. 1900. (1671)
 Leaf scorching of trees by the wind. Vt. Agr. Exp. Sta. Ann. Rept. 13, 281-282.
- _____. 1901. (1672);
 A soft rot of carrot and other vegetables* Vt. Agr. Exp. Sta. Ann. Rept. 13, 299-332.
- _____. 1901. (1673)
Bacillus carotovorus n. sp., die Ursache einer weichen Fäulnis der Möhre. Centbl. Bakt. 7: 12-21, 61-68.
- _____. 1902. (1674)
 Studies upon plum blight. Centbl. Bakt. 9: 835-841.
- _____. 1903. (1675)
 The disease of the potato in relation to its development. Trans. Mass. Hort. Soc., 144-156.
- _____. 1905. (1676)
 Disease resistance of potatoes. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 87, 1-39.
- _____. 1917. (1677)
 Lightning injury to kale. Phytopath. 7: 140-142.
- _____. 1917. (1678)
 Soil temperatures as a factor in phytopathology. Plant World 20: 229-237.
- _____. 1921. (1679)
 Experimental work on the relation of soil temperatures to disease in plants. Trans. Wis. Acad. Sci. 20: 433-459.
- _____. 1924. (1680)
 The relation of environment to disease in plants. Amer. Jour. Bot. 11: 601-609.
- _____. 1929. (1681)
 Essential factors in destructive plant disease development. Proc. Intern. Congress Plant Sci., Ithaca, 1926 (2), 1284-1298.
- _____. et al. 1912. (1682)
 Investigations of the potato fungus *Phytophthora infestans*. Vt. Agr. Exp. Sta. Bull. 168, 1-93.
- _____. et al. 1916. (1683)
 Plant pathology problems. Wis. Agr. Exp. Sta. Bull. 268, 18-25.
- _____. et al. 1920. (1684)
 Plant pathology investigations. Wis. Agr. Exp. Sta. Bull. 319, 26-36.
- _____. et al. 1920. (1685)
 Investigations in plant pathology. Wis. Agr. Exp. Sta. Bull. 323, 59-73.
- _____. et al. 1922. (1686)
 Plant disease investigations. Wis. Agr. Exp. Sta. Bull. 339, 32-48.
- _____. et al. 1923. (1687)
 Plant disease investigations. Wis. Agr. Exp. Sta. Bull. 352, 53-65.
- _____. et al. 1923. (1688)
 Bacterial leaf spot of clovers. Jour. Agr. Res. 25: 471-490.
- _____. et al. 1924. (1689)
 Relation of environment to health and disease in plants. Wis. Agr. Exp. Sta. Bull. 362, 47-49.
- _____. et al. 1926. (1690)
 Plant disease investigations. Wis. Agr. Exp. Sta. Bull. 388, 75-85.
- _____. and A. W. Edson. 1901. (1691)
 Potato scab and its prevention. Vt. Agr. Exp. Sta. Bull. 85, 109-120.
- _____. N. J. Giddings, and B. F. Lutman. 1912. (1692)
 Investigations of the potato fungus *Phytophthora infestans*. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 245, 1-93.
- _____. and W. W. Gilbert. 1915. (1693)
 Lightning injury to cotton and potato plants. U. S. Dept. Agr., Mo. Weather Rev. 43: 135.
- _____. _____, and M. W. Gardner. 1918. (1694)
 Lightning injury to crops. Records of observations. Phytopath. 8: 80. (Abst.).
- _____. and _____. 1918. (1695)
 Lightning injury to herbaceous plants. Phytopath. 8: 270-282.
- _____. and J. C. Gilman. 1915. (1696)
 The control of cabbage yellows through disease resistance. Wis. Agr. Exp. Sta. Res. Bull. 38, 1-70.
- _____. A. G. Johnson, and C. S. Reddy. 1917. (1697)
 Bacterial-blight of barley. Jour. Agr. Res. 11: 625-643.

- _____, J. Johnson, and J. G. Dickson. 1926. (1698)
Wisconsin studies upon the relation of soil temperature to plant disease. Wis. Agr. Exp. Sta. Res. Bull. 71, 1-144.
- _____, and H. H. McKinney. 1919. (1699)
The influence of soil temperature on potato scab. *Phytopath.* 9: 301-302.
- _____, and _____. 1920. (1700)
The influence of soil temperature on the development of potato scab. *Phytopath.* 10: 63. (Abst.).
- _____, _____, and H. Fellows. 1922. (1701)
The influence of soil temperature on potato scab. Wis. Agr. Exp. Sta. Res. Bull. 53, 1-35.
- _____, M. Miller, and E. Bailey. 1919. (1702)
Frost necrosis in potato tubers. Wis. Agr. Exp. Sta. Res. Bull. 46, 1-46.
- _____, and _____. 1919. (1703)
Frost necrosis of tulip leaves. *Phytopath.* 9: 475-476.
- _____, and W. J. Morse. 1902. (1704)
Report of the botanists. *Vt. Agr. Exp. Sta. Ann. Rept.* 15, 209-248.
- _____, and _____. 1903. (1705)
Occurrence of plant diseases in Vermont in 1903. *Vt. Agr. Exp. Sta. Ann. Rept.* 16, 153-168.
- _____, and C. S. Pomeroy. 1907. (1706)
The leaf blotch disease of the potato caused by *Cercospora concors*. *Vt. Agr. Exp. Sta. Ann. Rept.* 19, 236-257.
- _____, and R. S. Riker. 1927. (1707)
Aster wilt and yellows. Wis. Agr. Exp. Sta. Bull. 396, 117-119.
- _____, and _____. 1928. (1708)
Studies upon the Fusarium wilt of China aster. *Phytopath.* 18: 150. (Abst.).
- _____, and W. B. Tisdale. 1922. (1709)
The influence of soil temperature upon the development of flax wilt. *Phytopath.* 12: 409-413.
- _____, J. C. Walker, and W. B. Tisdale. 1921. (1710)
Fusarium resistant cabbage. Wis. Agr. Exp. Sta. Res. Bull. 48, 1-34.
- Jonescu, D. 1894. (1711)
Weitere Untersuchungen über die Blitzschläge in Bäumen. *Ber. Deutsch. Bot. Ges.* 12: 129-136.
- Jordan, W. H., F. C. Stewart, and H. J. Eustace. 1905. (1712)
Effect of certain arsenites on potato foliage. *N. Y. (Geneva) Agr. Exp. Sta. Bull.* 267, 263-284.
- Jorgensen, C. A. 1928. (1712a)
Gulspidssygen dens udbredelse, aarsager og bekaempelse. *Tidsskr. Planteavl* 34: 76-116.
- Jorgensen, I. and W. Stiles. 1917. (1713)
Atmospheric electricity as an environmental factor. *Jour. Ecol.* 5: 203-209.
- Jungner, J. R. 1901. (1714)
Über die Frostbeschädigung des Getreides im vergangenen Winter und die begleitende Pilzbeschädigung desselben. *Zeitschr. Pflanzenkr.* 11: 343-344.
- _____. 1904. (1715)
Über den klimatisch—biologischen Zusammenhang einer Reihe Getreidekrankheiten während der letzten Jahre. *Zeitschr. Pflanzenkr.* 14: 321-347.
- Juritz, C. F. 1912 and 1913. (1716)
Chlorosis in orchards near Bloemfontein. *Agr. Jour. Union So. Africa* 4: 854-865 and 5: 102-112.
- Kahlenberg, L. and R. H. True. 1896. (1717)
On the toxic action of dissolved salts and their electrolytic dissociation. *Bot. Gaz.* 22: 81-124.
- Kamenicky, K. 1930. (1718)
Der überblick der Forstschäden an Obstbäumen in der Tschechoslowakei. *Gartenbau.* 3: 273-276.
- Kamerling, Z. 1903. (1719)
Verslag van het Wortelrot-Oenderzoek. Soerabaia.
- Kappen, H. 1916. (1720)
Studien an saueren Mineralböden aus der Nähe von Jena. *Landw. Vers. Sta.* 88: 13-104.
- Karsner, H. T. and O. Saphir. 1926. (1721)
Influence of high partial pressures of oxygen on the growth of certain molds. *Jour. Infect. Diseases* 39: 231-236.

- Kaven, G. 1928. (1722)
Die Stippe der Äpfel. Die Kranke Pflanze 5: 187.
- _____, 1930. (1723)
Obstbäume und Windschäden. Die Kranke Pflanze 7: 86-88.
- Kay, A. O. 1925. (1724)
Soil moisture studies in relation to diseased tree conditions in Brevard County (Florida).
Citrus Ind. 6 (8): 5-9, 22-23.
- Kean, A. L. 1889. (1725)
A lily disease in Bermuda. Ann. Bot. 4: 169-170.
- Kearny, T. H. and L. L. Harter. 1907. (1726)
The comparative tolerance of various plants for the salts common in alkali soils. U. S.
Dept. Agr., Bur. Pl. Indus. Bull. 113, 1-20.
- Keitt, G. W. 1917. (1727)
Peach scab and its control. U. S. Dept. Agr., Dept. Bull. 395, 1-66.
- _____, 1926. (1728)
Some relations of environment to the epidemiology and control of apple scab. Proc.
Nat. Acad. Sci. 12: 68-74.
- _____, 1926. (1729)
Studies of apple scab infection under controlled conditions. Phytopath. 16: 77. (Abst.).
- _____, 1927. (1730)
Studies of apple scab and cherry leaf spot infection under controlled conditions.
Phytopath. 17: 45. (Abst.).
- _____, 1930. (1731)
Fall applications of fungicides in relation to apple-scab control. Phytopath. 20: 122.
(Abst.).
- _____, and L. K. Jones. 1924. (1732)
Seasonal development and control of apple scab and cherry leaf spot in relation to
environment. Phytopath. 14: 36. (Abst.).
- _____, and _____. 1926. (1733)
Studies of the epidemiology and control of apple scab. Wis. Agr. Exp. Sta. Res. Bull.
73, 1-104.
- _____, and E. E. Wilson. 1926. (1734)
Control of apple scab and cherry leaf spot. Wis. Agr. Exp. Sta. Bull. 388, 79-80.
- _____, and _____. 1929. (1735)
Third progress report of studies of fall applications of fungicides in relation to apple
scab control. Phytopath. 19: 87-88. (Abst.).
- Kellerman, W. A. and W. T. Swingle. 1930. (1736)
Preliminary experiments with fungicides for stinking smut of wheat. Kan. Agr. Exp.
Sta. Bull. 12, 27-50.
- Kelley, W. P. 1909. (1737)
The influence of manganese on the growth of pineapples. Hawaii Agr. Exp. Sta. Press
Bull. 23, 1-14.
- _____, 1909. (1738)
Manganese in some of its relations to the growth of pineapples. Jour. Indus. and Engin.
Chem. 1: 538-538.
- _____, 1912. (1739)
The function and distribution of manganese in plants and soils. Hawaii Agr. Exp. Sta.
Bull. 26, 7-41.
- _____, and S. M. Brown. 1928. (1740)
Boron in the soil and irrigation waters of Southern California and its relation to citrus
and walnut culture. Hilgardia 3: 445-458.
- _____, and A. B. Cummins. 1920. (1741)
Composition of normal and mottled citrus leaves. Jour. Agr. Res. 20: 161-191.
- _____, and E. E. Thomas. 1920. (1742)
The effects of alkali on citrus trees. Calif. Agr. Exp. Sta. Bull. 318, 305-337.
- Kelley, V. W. 1930. (1743)
Effect of certain hydrocarbon oils on respiration of foliage and dormant twigs of the
apple. Ill. Agr. Exp. Sta. Bull. 348, 369-406.
- Kelly, J. W. 1923. (1744)
Probable cause of the toxicity of the so-called poisonous greensand. Jour. Agr. Res. 23:
223-228.
- Kemmann. 1929. (1745)
Die Auswirkung der Forstschäden in der Rheinprovinz. Landw. Zeitschr. Rheinprov.
30: 345-346.

- Kendall, J. N. 1918. (1746)
 Abscission of flowers and fruits in the Solanaceae, with special reference to *Nicotiana*.
 Univ. Calif. Publ. Bot. 5: 347-428.
- Kendrick, J. B. 1923. (1747)
 Phytophthora rot of tomato, eggplant, and pepper. Proc. Ind. Acad. Sci., 1922, 299-306.
- 1926. (1748)
 Helcus bacterial spot of *Zea mays* and *Helcus* species. Iowa Agr. Exp. Sta. Res. Bull.
 100, 303-334.
- 1927. (1749)
 The black-root disease of radish. Ind. Agr. Exp. Sta. Bull. 311, 1-32.
- Kerr, A. P. and C. E. Smith. 1925. (1750)
 Toxicity of sodium silicofluoride and arsenical mixtures to plant foliage. U. S. Dept.
 Agr. Official Rec., 4 (48): 5.
- Kessler, H. 1927. (1751)
 Schädigungen der Vegetation durch Bergbau und Industrie. Landw. Zeitschr. Rheinprov.
 28: 268-271.
- 1928. (1752)
 Kalidüngung und Nachtfrostgefahr. Ernähr. Pflanze 24: 385-386.
- Kidd, F. 1919. (1753)
 Laboratory experiments on the sprouting of potatoes in various gas mixtures. New
 Phytol. 18: 248-252.
- Kidd, M. N. and A. Beaumont. 1924. (1754)
 Apple rot fungi in storage. Trans. Brit. Mycol. Soc. 10: 98-118.
- and R. G. Tomkins. 1928. (1755)
 An analytical study of the mortality of orange fruits at various constant temperatures.
 Dept. Sci. and Indus. Res., Rept. Food Invest. Bd.; London, 1927, 35-36.
- Kienholz, J. R. and F. D. Heald. 1930. (1756)
 Cultures and strains of the stinking smut of wheat. Phytopath. 20: 495-512.
- Kiessling, L. 1916. (1757)
 Über die Streifenkrankheit der Gerste als Sorten und Linienkrankheiten und einiges
 über ihr Bekämpfung. Fuhling's Landw. Zeit. 65: 537-549.
- Kilgore, B. W. 1891. (1758)
 On the cause and prevention of the injury to foliage by arsenites together with a new
 and cheap arsenite, and experiments on combining arsenites with fungicides. N. C. Agr.
 Exp. Sta. Tech. Bull. 2, 1-11.
- Kincer, J. B. 1925. (1759)
 Climate and weather influence on the fruit industry in the United States. Amer. Met.
 Soc. Bull. 6 (1): 12-14.
- King, C. J. 1923. (1760)
 Habits of the cotton root rot fungus. Jour. Agr. Res. 26: 405-418.
- and H. F. Loomis. 1926. (1761)
 Experiments on the control of cotton root rot in Arizona. Jour. Agr. Res. 32: 297-310.
- and — 1927. (1762)
 Factors influencing the severity of the crazy-top disorder of cotton. U. S. Dept. Agr.,
 Dept. Bull. 1484, 1-22.
- Kinney, L. F. 1891. (1763)
 Notes on potato scab. R. I. Agr. Exp. Sta. Bull. 14, 175-190.
- 1897. (1764)
 Celery culture in Rhode Island. R. I. Agr. Exp. Sta. Bull. 44, 17-63.
- Kirby, R. S. 1925. (1765)
 The take-all disease of cereals and grasses caused by *Ophiobolus cariceti* (Berkeley and
 Broome) Saccardo. N. Y. (Cornell) Agr. Exp. Sta. Mem. 88, 1-45.
- Kirchhoff, H. 1929. (1766)
 Beiträge zur Biologie und Physiologie des Mutterkornpilzes. Centbl. Bakt. 77: 310-369.
- Kirchner, O. v. 1908. (1767)
 Neue Beobachtungen über die Empfänglichkeit verschiedener Weizensorten für die Stein-
 brandkrankheit. Fuhling's Landw. Zeit. 57: 161-170.
- 1916. (1768)
 Untersuchungen über die Empfänglichkeit unserer Getreide für Brand- und Rostkrank-
 heiten. Fuhling's Landw. Zeit. 65: 1-28, 42-72, 92-137.
- 1916. (1769)
 Über die verschiedene Empfänglichkeit der Weizensorten für die Steinbrandkrankheit.
 Zeitschr. Pflanzenkr. 26: 17-25.

-
1922. (1770)
Die Grundlagen der Immunitätszüchtung. Jahrb. Deut. Landw. Ges. 36: 267-294.
- Kirschner, R. 1929. (1771)
Die Blattrollkrankheit des Hopfens. Fortschr. Landw. 4: 699-700. (Abst.).
- Kirste, H. 1925. (1772)
Ueber das Pflanzenwachstums auf sauren Böden. Zeitschr. Pflanzenernähr. u. Düng. (A) 5: 129-194.
- Klebahn, H. 1895. (1773)
Kulturversuche mit heteröscischen Rostpilzen. Zeitschr. Pflanzenkr. 5: 13-18, 69-79, 149-156, 257-268, 327-333.
-
1912. (1774)
Grundzüge der allgemeinen Phytopathologie. Berlin.
- Klebs, G. 1896. (1775)
Die Bedingungen der Fortpflanzung bei einigen Algen und Pilzen. Jena.
-
- 1898-1900. (1776)
Zur Physiologie der Fortpflanzung einiger Pilze. Jahrb. Wiss. Bot. 32: 1-70; 33: 513-593; 35: 80-203.
- Kleinstück, M. 1928. (1777)
Das dendrologische Vorkommen des Mangans. Tharandter Forstl. Jahrb. 79: 415-419.
- Klinck, L. S. 1910. (1778)
The susceptibility of certain cereals to smut. Quebec Soc. Prot. Plants Ann. Rept. 2, 14-15.
- Klotz, L. J. 1923. (1779)
A study of the celery early blight fungus, *Cercospora apii* Fres. Mich. Agr. Exp. Sta. Tech. Bull. 63, 1-34.
- Knight, H. 1928. (1780)
A micro-technique for observing oil penetration in citrus leaves after spraying. Science 68: 572.
-
- J. C. Chamberlin, and C. D. Samuels. 1929. (1781)
On some limiting factors in the use of saturated petroleum oils as insecticides. Plant Physiol. 4: 299-321.
- Knight, L. I. and W. Crocker. 1913. (1782)
Toxicity of smoke. Bot. Gaz. 55: 337-371.
- Knight, R. C. 1924. (1783)
The response of plants in soil- and water-culture to aeration of the roots. Ann. Bot. 38: 305-325.
- Knippel, K. 1928. (1784)
Beobachtungen über Frostbeschädigungen an Obstbäumen. Obst- u. Gemüsebau 74: 41-42.
- Knop, W. 1884. (1785)
Ueber die Aufnahme verschiedener Substanzen durch die Pflanze, welche nicht zu den Nährstoffen gehören. Jahresb. Agr. Chem. 27: 138-140.
- Knowlton, H. E. and M. J. Dorsey. 1927. (1786)
A study of the hardness of the fruit buds of the peach. W. Va. Agr. Exp. Sta. Bull. 211, 1-28.
- Knudson, L. 1925. (1787)
Hydrogen-ion concentration and plant growth. Jour. Amer. Soc. Agron. 17: 711-716.
- Kny, H. 1871-1872. (1788)
Einfluss des Leuchtgases auf die Baumvegetation. Bot. Zeit. 29: 852-854, 867-874.
- Kochman, J. 1929. (1789)
Studia biologiczne nad pasorzytem Wierzby *Fusicladium saliciperdu* (All. et Tub.) Lind. (English summary) Mém. Inst. Nat. Polonais d'Econ. Rur. à Putawy 10: 555-573.
- Köck, G., P. Reckendorfer, and F. Beran. 1929. (1790)
Der Schwefeldioxygehalt der Luft und sein Einfluss auf die Pflanze. Fortschr. Landw. 4: 170-172.
- König, J. 1879. (1791)
Untersuchungen über Beschädigungen von Boden und Pflanzen durch industrielle Abflusswasser und Gase. Beidermann's Centbl. f. Agr.-chem. 8: 564-567.
-
1883. (1792)
Nachtrag zu vorstehenden Versuchen über den schädlichen Einfluss von Kochsalz und zinksulfathaltigem Wasser auf Boden und Pflanzen. Landw. Jahrb. 12: 837-844.
-
1884. (1793)
Einfluss von säurehaltigen Rauchgasen auf die Vegetation. Jahresb. Agr. Chem. 27: 234-238.

- Koning, C. J. 1899. (1794)
Die Flecken—oder Mosaikkkrankheit des holländischen Tabaks. Zeitschr. Pflanzenkr. 9:
65-80.
- . 1900. (1795)
Der Tabak. Studien über seine Kultur und Biologie. Amsterdam.
- Korff, G. 1906. (1796)
Über Einwirkung von Öldämpfe auf die Pflanzen. Prakt. Bl. Pflanzenbau u. Schutz 4:
78-81.
- and F. Ottensooser. 1926. (1797)
Ueber die Wirkung einiger Bodenhandlungsmittle auf das Pflanzenwachstum. Arb. Biol.
Reichsanst Land- u. Forstw. 15: 47-74.
- Korstian, C. F. 1921. (1798)
Effect of a late spring frost upon forest vegetation in the Wasatch mountains of Utah.
Ecology 2: 47-52.
- and N. J. Fetherolf. 1921. (1799)
Control of stem girdle of spruce transplants caused by excessive heat. Phytopath. 11:
485-490.
- , C. Hartley, L. F. Watts, and G. G. Hahn. 1921. (1800)
A chlorosis of conifers corrected by spraying with ferrous sulfate. Jour. Agr. Res. 21:
153-171.
- Kotila, J. E. 1918. (1801)
Frost injury of potato tubers. Mich. Acad. Sci. Ann. Rept. 20: 451-460.
- . 1923. (1802)
Fall and winter care of potatoes. Mich. Agr. Exp. Sta. Quart. Bull. 6, 8-11.
- . 1929. (1803)
A study of the biology of a new spore-forming Rhizoctonia, Corticium praticola.
Phytopath. 19: 1059-1099.
- Kotte, W. 1929. (1804)
Rauchschäden an Steinobstfrüchten. Nachrichtenbl. Deutsch. Pflanzenschutzdienst 9
(11): 91-92.
- . 1930. (1805)
Über den Einfluss der H-Ionen-Konzentration auf das Wachstum einiger phytopathogener
Bakterien. Phytopath. Zeitschr. 2: 443-454.
- Kotthoff, P. and G. Friedrichs. 1929. (1806)
Der rote Brenner der Amaryllis. Obst- u. Gartenbauzeit 18: 32-33.
- Kovacevski, I. C. 1930. (1807)
New investigations of the etiology of black rot of Sesame. (Russian). Ann. Univ.
Sofia, Fac. Agron. et Sylvicult., 1929-1930, 455-468.
- Krakover, L. J. 1917. (1808)
The leaf-spot disease of red clover caused by Macrosporium sarcinaeforme Cav. Mich.
Acad. Sci. Rept. 19: 273-328.
- Kränzlin, G. 1908. (1809)
Untersuchungen an panaschierten Pflanzen. Zeitschr. Pflanzenkr. 18: 193-203.
- Kratzmann, E. 1914. (1810)
Zur physiologischen Wirkung der Aluminumsalze auf die Pflanze. Sitz. K. Akad. Wiss.
Nat. Kl., Abt. I, 123: 221-239.
- . 1915. (1811)
The physiological action of salts of aluminum upon plants. Intern. Inst. Agr., Rome,
Mo. Bull. Agr. Intel. and Pl. Diseases 6: 403-404. (Abst.).
- Krauch, C. 1882. (1812)
Ueber Pflanzenvergiftungen. Jour. Landw. 30: 271-291.
- Kraus, C. 1908. (1813)
Die Lagerung der Getreide.
- Krause, A. W. 1930. (1814)
Untersuchungen über den Einfluss der Ernährung; Belichtung und Temperatur auf die
Perithezienproduktion einiger Hypocreaceen. Zeitschr. Parasitenkunde 2: 419-476.
- Krebs, H. 1927. (1815)
Nichtparasitäre Krankheiten der Kartoffel, hervorgerufen durch ungünstige Boden-
verhältnisse, Wasser- und Nährstoff-mangel. D. Prakt. Landw. 46: 213-214.
- Kreitz, W. 1908. (1816)
Untersuchungen über die Schale verschiedener Kartoffelsorten und ihre Beeinflussung
durch Bodenverhältnisse, Feuchtigkeit und Düngung. Arb. K. Biol. Anst. Land- u.
Forstw. 6: 2-27.

- Krout, W. S. 1921. (1818)
Treatment of celery seed for the control of Septoria blight. Jour. Agr. Res. 21: 369-372.
- Kruger. 1910. (1819)
Maladies produites sur la betterave á sucre et ayant pour cause la reaction du sol. La
Sucrierie Indig. et Colon. (Paris) 76: 505. (Abst.).
- Krüger, F. 1913. (1820)
Beiträge zur Kenntnis einiger Gloeosporien I and II. Arb. K. Biol. Anst. Land- u.
Forstw. 9: 233-323.
- Krüger, W. and G. Wimmer. 1927. (1821)
Ueber nicht parasitäre Krankheiten der Zuckerrübe. Mitt. Anhalt. Versuchsstat., Bern-
burg, 65: 195-289.
- Kuhle, L. 1908. (1822)
Ein erfolgreicher Versuch zur Bekämpfung des Gersten—Flugbrandes. Illus. Landw.
Zeit. 28: 578-579.
- Kuhnoltz-Lordat, G. 1928. (1823)
Les chloroses. Prog. Agr. et Vitic. 89: 310-312.
- Kulkarni, G. S. 1918. (1824)
Smuts of Jowar (Sorghum) in the Bombay Presidency. Pusa Agr. Res. Inst. India Bull.
78, 1-26.
- . 1922. (1825)
Conditions influencing the distribution of grain smut (*Sphacelotheca sorghi*) of Jowar
(Sorghum) in India. Agr. Jour. India 17: 159-162.
- Kunkle, L. O. 1914. (1826)
Physical and chemical factors influencing the toxicity of inorganic salts to *Monilia*
sitophila (Mont.) Sacc. Bull. Torrey Bot. Club 41: 265-293.
- . 1920. (1827)
Further data on the orange-rusts of *Rubus*. Jour. Agr. Res. 19: 501-512.
- Kuribayashi, K. 1928. (1828)
Studies on overwintering primary infection and control of rice blast fungus, *Piricularia*
oryzae. (Japanese). Ann. Phytopath. Soc. Japan 2: 99-117.
- Kurosawa, E. 1927. (1829)
Studies on *Plasmopara cubensis* (In Japanese). Jour. Nat. Hist. Soc., Formosa, 17:
1-18.
- . 1929. (1830)
On the cultural characters of the "bakanae" disease fungi on various nutrient media
and the temperature for their development. Jap. Jour. Bot. 4: 90-91. (Abst.).
- Kurz, H. 1923. (1831)
Hydrogen ion concentration in relation to ecological factors. Bot. Gaz. 76: 1-29.
- . 1930. (1832)
The relation of pH to plant distribution in nature. Amer. Nat. 64: 314-341.
- Küster, E. 1916. (1833)
Beiträge zur Kenntnis des Laubfalles. Ber. Deutsch. Bot. Ges. 34: 184-193.
- . 1925. (1834)
Pathologische Pflanzenanatomie. Jena.
- Kyle, C. H. 1930. (1835)
Relation between the vigor of the corn plant and its susceptibility to smut (*Ustilago*
zeae). Jour. Agr. Res. 41: 221-231.
- Labrousse, F. 1930. (1836)
Influence de la fumure sur la résistance d'une variété de laitue à la maladie du collet
causée par le *Sclerotinia libertiana*. Rev. Path. Vég. et Ent. Agric. 17: 222-226.
- and J. Sarejanni. 1930. (1837)
Recherches physiologiques sur quelques champignons parasites. Phytopath. Zeitschr. 2:
1-38.
- Lagatu, H. and L. Maume. 1928. (1838)
Etude biochimique de la chlorose. Prog. Agr. et Vitic. 89: 116-119, 137-140, 165-168.
- Lagerberg, T., C. Lundberg, and E. Melin. 1928. (1839)
Biological and practical researches into blueing in Pine and Spruce. Svenska Skog.
Tidsskr., 1927, 145-272, 561-739.
- Laibach, F. 1930. (1840)
Über die Bedingungen der Perithezienbildung bei den Erysipheen. Jahrb. Wiss. Bot.
72: 106-186.
- Lambert, E. B. 1929. (1841)
The relation of weather to the development of stem rust in the Mississippi Valley.
Phytopath. 19: 1-71.

- _____. 1930. (1842)
Studies on the relation of temperature to the growth, parasitism, thermal death points, and control of *Mycogone perniciosa*. *Phytopath.* 20: 75-83.
- Landgraf, K. E. 1929. (1843)
Bodenreaktion und Wachstum der Wiesenpflanzen. *Zeitschr. Pflanzenernähr. u. Düng.* (A) 13: 213-228.
- Langhoffer, A. 1929. (1844)
Le dépérissement du Chêne en Yougoslavie, spécialement dans la Slavonie. *Rev. Eaux et Forêts* 67: 763-765.
- Langlet, O. 1930. (1845)
Einige eigentümliche Schädigungen an Kiefernwald nebst einem Versuch, ihre Entstehung zu Erklären. *Zeitschr. Pflanzenkrank. u. Pflanzenschutz* 40: 261-265.
- Larmer, F. G. and G. H. Coons. 1930. (1846)
The physiology and variations of *Cercospora beticola* in pure culture. *Mich. Acad. Sci. Papers* 11: 75-104.
- LaRue, C. D. 1929. (1847)
The effect of environmental factors on the spore size of *Pestalozzia guopini*. *Mich. Acad. Sci.* 9: 227-237.
- Larue, P. 1916. (1848)
Le brouillard et les maladies. *Rev. Vitic.* 44: 411-412.
- Laubert, R. 1919. (1849)
Ungewöhnliche Flecke an Äpfeln und Birnen. *Deut. Obstbau Zeit.* 65: 255-256.
- _____. 1927. (1850)
Eine merkwürdige neue Schädigung an Winteräpfeln. *Obst- u. Gemüsebau* 73: 15, 46-47.
- Laurent, E. 1899. (1851)
Recherches expérimentales sur les maladies des plantes. *Ann. Inst. Pasteur* 13: 1-48.
- _____. 1902. (1852)
De l'action interne du sulfate de cuivre dans la résistance de la pomme de terre au *Phytophthora infestans*. *Compt. Rend. Acad. Sci. (Paris)* 135: 1040-1042.
- _____. 1911. (1853)
Les conditions physiques de resistance de la vigne au mildiou. *Compt. Rend. Acad. Sci. (Paris)* 152: 103-106.
- Lauritzen, J. I. 1919. (1854)
The relation of temperature and humidity to infection by certain fungi. *Phytopath.* 9: 7-35.
- _____. 1926. (1855)
Infection and temperature relations of black rot of sweet potatoes in storage. *Jour. Agr. Res.* 33: 663-676.
- _____. 1926. (1856)
The relation of black rot to the storage of carrots. *Jour. Agr. Res.* 33: 1025-1041.
- _____. 1929. (1857)
Rhizoctonia rot of turnips in storage. *Jour. Agr. Res.* 38: 93-108.
- _____. and L. L. Harter. 1923. (1858)
The relation of humidity to the infection of sweet potatoes by *Rhizopus*. *Phytopath.* 13: 56. (Abst.).
- _____. and _____. 1923. (1859)
Species of *Rhizopus* responsible for the decay of sweet potatoes in the storage house and at different temperatures in infection chambers. *Jour. Agr. Res.* 24: 441-456.
- _____. and _____. 1925. (1860)
The influence of temperature on the infection and decay of sweet potatoes by different species of *Rhizopus*. *Jour. Agr. Res.* 30: 793-810.
- _____. and _____. 1926. (1861)
The relation of humidity to infection of the sweet potato by *Rhizopus*. *Jour. Agr. Res.* 33: 527-539.
- _____. and R. C. Wright. 1930. (1862)
Some conditions affecting the storage of peppers. *Jour. Agr. Res.* 41: 295-305.
- Lawrence, A. O. 1923. (1863)
Susceptibility of *Eucalyptus* to drought. *Aust. Forestry Jour.* 6: 133-134.
- Lawrence, W. H. 1905. (1864)
Blackspot canker and blackspot apple rot. *Jour. Mycol.* 11: 164-165.
- _____. and S. B. Johnson. 1915. (1865)
Sunscald of newly planted olive trees. *Ariz. Agr. Exp. Sta. Ann. Rept.* 26, 549-552.
- Leach, J. G. 1921. (1866)
Colorado plant diseases. *Colo. Agr. Exp. Sta. Bull.* 259, 1-96.

-
- _____. 1923. (1867)
The parasitism of *Colletotrichum lindemuthianum*. Minn. Agr. Exp. Sta. Tech. Bull. 14, 1-41.
-
- _____. 1927. (1868)
The relation of insects and weather to the development of heart rot of celery. Phytopath. 17: 663-667.
-
- _____. 1930. (1869)
Survival of the potato-black-leg pathogene in the soil and some factors influencing infection. Phytopath. 20: 127. (Abst.).
-
- _____. 1930. (1870)
Potato blackleg: The survival of the pathogene in the soil and some factors influencing infection. Phytopath. 20: 215-228.
- Leather, J. W. 1915. (1871)
Soil gases. Mem. Dept. Agr. India, Chem. Ser. 4 (3): 85-134.
- Lebard, P. 1930. (1872)
Relations entre l'altitude l'humidité et les substitutions de dégénérescence de la pomme de terre. Compt. Rend. Acad. Agr. France 16: 999-1004.
- Lebedeff, V. I. 1929. (1873)
Blue stain of timber and the turpentine industry. (Russian) Trans. Indus. Res. Inst., Archangel, (5), 1-60.
- Lebedeva, L. A. 1927. (1874)
Phenological observations on plant diseases in Russia in 1927. (Russian). Mater. Mycol. Phytopath. 6: 227-238.
- Lebenbauer, P. A. 1920. (1875)
The control of carnation stem rot. Florists' Exch. 49: 253-254, 316, 318.
- Lebrun, L. 1910. (1876)
Le rot-gris en 1910. Prog. Agr. et Vitic. 54: 502-509.
- LeClerg, E. L. 1927. (1877)
Leaf temperature in relation to tip-burn of lettuce. Phytopath. 17: 44-45. (Abst.).
- Lecoq, R. 1927. (1878)
Le chlorose de la vigne. Jardinage 14: 279.
- Lee, H. A. 1917. (1879)
A new bacterial citrus disease. Jour. Agr. Res. 9: 1-8.
-
- _____. 1924. (1880)
Sugar-cane diseases. Proc. Intern. Conf. Soc. Sugar-cane Technologists 1: 9-12.
-
- _____. 1926. (1881)
Pathology. Rept. Exp. Sta. Com., 45th Ann. Meeting Hawaiian Sugar Planters' Assoc., 1925, 39-48.
-
- _____. 1928. (1882)
Experiments showing the cause of leaf burn of sugar cane. Hawaiian Planters' Rec. 32: 50-56.
-
- _____. 1929. (1883)
The toxic substance produced by the eye spot fungus of sugar-cane, *Helminthosporium sacchari* Butler. Plant Physiol. 4: 193-212.
-
- _____, J. P. Martin, and H. A. Purdy. 1925. (1884)
Diagnostic studies of the organism of red-stripe disease. Pamphlet Exp. Sta. Hawaiian Sugar Planters' Assoc., 18-24.
-
- _____ and _____. 1928. (1885)
Effect of fertilizer constituents on the eye-spot disease of sugar cane. Jour. Indus. and Engin. Chem. 20: 220-224.
-
- _____ and J. S. McHargue. 1928. (1886)
The effect of a manganese deficiency on the sugar cane plant and its relationship to Pahala blight of sugar cane. Phytopath. 18: 775-786.
- Lehman, S. G. 1923. (1887)
Pod and stem blight of soybean. Ann. Mo. Bot. Gard. 10: 111-178.
-
- _____. 1925. (1888)
Studies on the treatment of cotton seed. N. C. Agr. Exp. Sta. Tech. Bull. 26, 1-71.
-
- _____. 1928. (1889)
Frog-eye leaf spot of soy bean caused by *Cercospora diazu* Miura. Jour. Agr. Res. 36: 811-833.
- Lendner, A. 1897. (1890)
Des influences combinées de la lumière et du substratum sur le développement des champignons. Ann. Sci. Nat., Ser. 8, 3: 1-64.

- _____. 1930. (1891)
 Determination de Mucorinées (Deux Mucors nouveaux). Bull. Soc. Bot. Geneve, Ser. 2,
 2: 256-263.
- Leonard, L. T. 1923. (1893)
 An influence of moisture on bean wilt. Jour. Agr. Res. 24: 749-752.
- _____. 1924. (1894)
 Effect of moisture on a seed-borne bean disease. Jour. Agr. Res. 28: 489-497.
- Leonian, L. H. 1919. (1895)
 Fusarium wilt of Chile pepper. N. Mex. Agr. Exp. Sta. Bull. 121, 1-32.
- _____. 1924. (1896)
 A study of factors promoting pycnidium-formation in some Sphaeropsidales. Amer.
 Jour. Bot. 11: 19-50.
- _____. 1929. (1897)
 Studies on the variability and dissociations in the genus Fusarium. Phytopath. 19:
 753-768.
- Leroux, L. 1925. (1898)
 La chlorose des plantes. Rev. Gén. Sci. 36: 418-420.
- Lesage, P. 1894. (1899)
 Recherches physiologiques sur les champignons. Compt. Rend. Acad. Sci. (Paris) 118:
 607-610.
- _____. 1895. (1900)
 Recherches expérimentales sur la germination des spores du Penicillium glaucum. Ann.
 Sci. Nat. Bot., Ser. 8, 1: 309-322.
- Lesczenko, P. 1930. (1901)
 Influence of mineral fertilizers on the development of potato scab. (English Sum.).
 Trans. Phytopath. Sect. State Inst. Agr. Sci., Bydgoszcz, 9: 15-23; also Biol. Absts. 5:
 1046, 1931.
- Letow, A. S. 1930. (1902)
 Über die Bedeutung der Sclerotinia libertiana Fuckel auf Sonnenblumen. Phytopath.
 Zeitschr. 2: 167-180.
- Leukel, R. W., J. G. Dickson, and A. G. Johnson. 1929. (1903)
 Experiments on stripe disease of barley and its control. Phytopath. 19: 81. (Abst.).
- Levin, E. 1915. (1904)
 Light and pycnidia formation in the Sphaeropsidales. Mich. Acad. Sci. Rept. 17:
 134-135.
- _____, E. A. Bessey, and G. H. Coons. 1916. (1905)
 The leaf-spot disease of tomatoes. Mich. Agr. Exp. Sta. Tech. Bull. 25, 1-51.
- Levine, M. N. 1921. (1906)
 Studies on plant cankers III. Amer. Jour. Bot. 8: 507-525.
- _____. 1928. (1907)
 Biometrical studies on the variation of physiologic forms of Puccinia graminis tritici and
 the effects of ecological factors on the susceptibility of wheat varieties. Phytopath. 18:
 7-123.
- Lewakowski, N. 1873. (1908)
 Ueber den Einfluss des Wassers auf das Wachstum der Stengel und Wurzeln einiger
 Pflanzen. Just's Bot. Jahrb. 1: 594. (Abst.).
- Lewis, C. E. 1913. (1909)
 Comparative studies of certain disease producing species of Fusarium. Me. Agr. Exp.
 Sta. Bull. 219, 203-258.
- Lewis, C. I. 1915. (1910)
 Fruit-pit studies in the Willamette valley. Ore. Agr. Exp. Sta., Crop Pest and Hort.
 Rept., 1913-1914, 35-37.
- Lewis, D. E. 1913. (1911)
 The control of apple blotch. Kan. Agr. Exp. Sta. Bull. 196, 519-574.
- Lewis, I. M. 1914. (1911a)
 A bacterial disease of Erodium and Pelargonium. Phytopath. 4: 221-231.
- _____, and E. Watson. 1927. (1912)
 A bacterial disease of Bowlesia. Phytopath. 17: 507-512.
- Lex, O. 1928. (1913)
 Untersuchungen über das Auftreten und die Bekämpfung der Dorrfleckenkrankheit des
 Hafers. Diss. Kiel.
- Liese, J. 1927. (1914)
 Nadelverlust der Kiefer durch Hagel. Forstarchiv. 3: 237-238.

- Lilienshtern, M. F. 1927. (1915)
The antagonistic influence of hydrogen and calcium ions on the development of Saprolegnia. (Russian). Chem. Absts. 21: 3217.
- Limber, D. P. 1927. (1916)
Fusarium moniliforme in relation to diseases of corn. Ohio Jour. Sci. 27: 232-246.
- Lindfors, T. 1924. (1917)
Einige Kulturversuche mit Fusarium-Arten in Nährlösungen von verschiedener Wasserstoffionenkonzentration. Bot. Not., 1924, 161-171.
- _____. 1924. (1918)
Bidrag till kännedomen om klumpratsjukans bekämpande. K. Landtbr. Akad. Handl. Tidsskr. 63: 267-287.
- Line, J. 1926. (1919)
Aluminum and acid soils. Jour. Agr. Sci. 16: 335-364.
- Linford, M. B. 1926. (1920)
Black-leaf of peas caused by Fusicladium pisicola n. sp. Phytopath. 16: 549-558.
- _____. 1928. (1921)
A Fusarium wilt of peas in Wisconsin. Wis. Agr. Exp. Sta. Res. Bull. 85, 1-44.
- Link, G. K. K. 1916. (1922)
A physiological study of two strains of Fusarium in their causal relation to tuber rot and wilt of potato. Nebr. Agr. Exp. Sta. Res. Bull. 9, 1-45.
- _____. 1916. (1923)
A physiological study of two strains of Fusarium in their causal relation to tuber rot and wilt of potato. Bot. Gaz. 62: 169-209.
- _____. 1923. (1924)
Mosaic and leaf roll of the potato in the Northwest. Phytopath. 13: 39. (Abst.).
- _____, G. B. Ramsey, and A. A. Bailey. 1924. (1925)
Botrytis rot of the globe artichoke. Jour. Agr. Res. 29: 85-92.
- Lipman, C. B. 1914. (1926)
The poor nitrifying power of soils a possible cause of "die-back" (Exanthema) in lemons. Science 39: 728-730.
- _____. 1915. (1927)
A suggestion of a new phase of the problem of physiological diseases of plants. Phytopath. 5: 111-116.
- _____, A. R. Davis, and E. S. West. 1926. (1928)
The tolerance of plants for NaCl. Soil Sci. 22: 303-322.
- _____, and W. F. Gericke. 1917. (1929)
Experiments on the effects of constituents of solid smelter wastes on barley growth in pot cultures. Univ. Calif. Publ. Agr. Sci. 1: 495-587.
- _____, and F. H. Wilson. 1913. (1930)
Toxic inorganic salts and acids as affecting plant growth. Bot. Gaz. 55: 409-420.
- Lisges, H. 1923. (1931)
Die Einwirkung niedriger Wärmegrade auf die Pflanze. Deut. Obst- u. Gemüsebau Zeit. 69: 344-347.
- Little, W. C. 1883. (1932)
Report on wheat mildew. Jour. Roy. Hort. Soc., London, 19: 634-691.
- Liu, H. 1926. (1933)
The salt requirements of tobacco grown in sand cultures. Md. Agr. Exp. Sta. Bull. 288, 133-154.
- Livingston, B. E. and E. E. Free. 1917. (1934)
The effect of deficient soil oxygen on the roots of higher plants. Johns Hopkins Univ. Circ. n. s. 3: 182-185.
- _____, and F. Shreve. 1921. (1935)
The distribution of vegetation in the United States, as related to climatic conditions. Carnegie Inst., Washington, Publ. 284, 1-590.
- Lloyd, F. E. 1914. (1936)
Abscission. Ottawa Naturalist 28: 42-52, 61-75.
- _____. 1920. (1937)
Environmental changes and their effect on boll shedding in cotton. N. Y. Acad. Sci. 29: 1-131.
- _____. 1921. (1938)
Abscission of fruits in Juglans californica quercina. Proc. and Trans. Roy. Soc. Canada, III, 14: 17-22.

- Lochhead, W. 1905. (1939)
Some fungus troubles of the year. Ont. Agr. Col. and Exp. Farm Ann. Rept. 31, 52-58.
- Lodeman, E. G. 1894. (1940)
Some grape troubles of western New York. N. Y. (Cornell) Agr. Exp. Sta. Bull. 76, 413-454.
- Lodewijks, J. A. 1910. (1941)
Zur Mosaikkrankheit des Tabaks. Rec. Trav. Bot. Nederland 7: 107-129.
- Loehwing, W. F. 1928. (1942)
Some physico-chemical effects of organic soil colloids. Proc. Iowa Acad. Sci. 34: 149-152.
- Loew, O. and W. May. 1901. (1943)
The relation of lime and magnesia to plant growth. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 1, 1-53.
- and S. Sawa. 1902. (1944)
On the action of manganese compounds on plants. Bull. Col. Agr. (Tokyo) 5: 161-172.
- Lühnis, M. P. 1923. (1945)
On the resistance of the potato tuber against *Phytophthora*. Rept. Intern. Conf. Phytopath. and Econ. Ent. Holland, 174-179.
- , 1925. (1946)
Onderzoek naar het verband tusschen de weersgesteldheid en de Aardappelziekte (*Phytophthora infestans*) en naar de eigenschappen, die de vatbaarheid der knollen voor deze ziekte bepalen. Meded. Wetensch. Comm. voor Advies en Onderzoek in het Belang van de Volkswelvaart en Weerbaarheid. 129 pp.
- , 1926. (1947)
An investigation on the relation between the weather conditions and the occurrence of potato blight (*Phytophthora infestans*); and on the qualities that determine the degree of susceptibility of the tubers for this disease. Centbl. Bakt. 66: 144-148.
- Long, W. H. 1922. (1948)
Mistletoe and smelter smoke. Phytopath. 12: 535-536.
- Longman, S. 1909. (1949)
The dry-rot of potatoes. Jour. Linn. Soc. Bot. 39: 120-129.
- Losch, H. 1921. (1950)
Eine Beobachtung über Apfelmehltaubefall und seine Beziehung zur örtlichen Lage. Zeitschr. Pflanzenkr. 31: 22-24.
- Loucks, K. W. 1929. (1951)
Citrus canker. Fla. Agr. Exp. Sta. Ann. Rept., 1928, 67.
- , 1930. (1952)
Some physiological studies of *Phytophthora citri*. Jour. Agr. Res. 41: 247-258.
- Loughridge, R. H. 1900. (1953)
Effect of alkali on citrus trees. Calif. Agr. Exp. Sta. Ann. Rept., 1897-1898, 99-113.
- , 1901. (1954)
Tolerance of alkali by various cultures. Calif. Agr. Exp. Sta. Bull. 138, 1-43.
- Lounsbury, C. P. 1908. (1955)
The *Fusicladium* disease of the pear and apple. Cape Good Hope Agr. Jour. 33: 16-32.
- Lowther, G. 1913. (1956)
Apple rosette. Proc. Wash. State Hort. Assoc. 9: 28-37.
- Ludwig, C. A. 1918. (1957)
The influence of illuminating gas and its constituents on certain bacteria and fungi. Amer. Jour. Bot. 5: 1-31.
- Ludwig, O. 1928. (1958)
Untersuchungen an *Ascochyta pisi* Lib. Beitr. Biol. Pflanzen 16: 464-510.
- Ludwigs, K. 1923. (1959)
Beobachtungen über die Bodensäurekrankheit an Getreide. Nachrichtenbl. d. Pflanzenschutz. 3: 41-42.
- Lundegårdh, H. 1923. (1960)
Die Bedeutung des Kohlensäure—gehalts und der Wasserstoffionkonzentration des Bodens für die Entstehung der Fusariosen. Bot. Not., 1923, 25-52.
- , 1924. (1961)
Der Einfluss der Wasserstoffionkonzentration in Gegenwart von Salzen auf das Wachstum von *Gibberella saubinetii*. Biochem. Zeitschr. 146: 564-572.
- , 1924. (1962)
Ueber die Interferenzwirkung von Wasserstoffionen und Neutralsalzionen auf Keimung und Wachstum des Weizens. Biochem. Zeitschr. 149: 207-215.

- _____. 1927. (1963)
Vaxtfysiologien i sin tillämpning på jordbruket. K. Landtbr. Akad. Handl. Tidsskr. 66: 151-166.
- _____. 1927. (1964)
Carbon dioxide evolution of soil and crop growth. Soil Sci. 23: 417-453.
- _____. 1929. (1965)
Utsädesbetning. De vid Centralanstaltens Botaniska avdelning pågående undersökningarna. Landtmannen 12: 115-116.
- Lungren, E. A. and L. W. Durrell. 1928. (1966)
Seed treatments for stinking smut of wheat. Colo. Agr. Exp. Sta. Bull. 333, 1-12.
- Lustner, G. 1906. (1967)
Untersuchungen über die Peronospora-epidemien der Jahre 1905 und 1906. Ber. Lehrh. Forschungsanst. Wein, Obst- u. Gartenbau Geisenheim, 119-140.
- Lutman, B. F. 1911. (1968)
Potato diseases and the weather. Vt. Agr. Exp. Sta. Bull. 159, 248-296.
- _____. 1919. (1969)
Tip-burn of the potato and other plants. Vt. Agr. Exp. Sta. Bull. 214, 1-28.
- _____. and G. C. Cunningham. 1914. (1970)
Potato scab. Vt. Agr. Exp. Sta. Bull. 184, 1-64.
- _____. and N. L. Walbridge. 1929. (1971)
The rôle of magnesium in the aging of plants. Vt. Agr. Exp. Sta. Bull. 296, 1-48.
- Lutz, O. 1909. (1972)
Ueber den Einfluss gebrauchter Nährlösungen auf Keimung und en Entwicklung einiger Schimmelpilze. Ann. Mycol. 7: 91-133.
- Lyon, T. L. and H. O. Buckman. 1922. (1973)
The nature and properties of soils. New York.
- _____. and A. Keyser. 1905. (1974)
Winter wheat. Nebr. Agr. Exp. Sta. Bull. 89, 1-51.
- Lyttkens, A. 1894. (1975)
Arseniks inflytande på växter. K. Landtbr. Akad. Handl. Tidsskr. 33: 317-320.
- Maas, H. 1927. (1976)
Die Kalidüngung als Middle gegen Rost und Lagerfrucht. Ernähr. Pflanze 23: 53-55.
- Maas, J. 1929. (1977)
Cyanogas-Schäden bei Cinerarien. Die Gartenwelt 33: 217.
- Macchiati, L. 1894. (1978)
La bacteriosis des grappes de la vigne. Rev. Intern. Vit. et Oenol. 1: 98-109, 129-136.
- MacDaniels, L. H. and A. J. Heinicke. 1930. (1979)
To what extent is "spray burn" of apple fruit caused by the freezing of the flowers? Phytopath. 20: 903-906.
- MacDougall, D. T. 1902. (1980)
Effect of lightning on trees. Jour. N. Y. Bot. Gard. 3: 131-135.
- MacInnes, J. 1922. (1981)
The growth of the wheat scab organism in relation to hydrogen-ion concentration. Phytopath. 12: 290-294.
- _____. and R. Fogelman. 1923. (1982)
Wheat scab in Minnesota. Minn. Agr. Exp. Sta. Tech. Bull. 18, 1-32.
- Machacek, J. E. 1928. (1983)
Studies on the association of certain phytopathogens. Quebec Soc. Prot. Plants Ann. Rept. 20, 16-63.
- MacMillan, H. G. 1918. (1984)
An epidemic of corn smut following hail. Phytopath. 8: 584-585.
- _____. 1918. (1985)
Sunscald of beans. Jour. Agr. Res. 13: 647-650.
- _____. 1919. (1986)
Fusarium-blight of potatoes under irrigation. Jour. Agr. Res. 16: 279-303.
- _____. 1920. (1987)
A frost injury of potatoes. Phytopath. 10: 423-424.
- _____. 1922. (1988)
Influence of the meteorological factors on potato disease and production in Colorado. Phytopath. 12: 445. (Abst.).
- _____. 1923. (1989)
Potato mosaic masking at high altitudes. Phytopath. 13: 39. (Abst.).
- _____. 1923. (1990)
Cause of sunscald of beans. Phytopath. 13: 376-380.

- _____. 1926. (1991)
Irrigation and diseases. *Amer. Potato Jour.* 3: 198-201.
- _____. and L. P. Byars. 1920. (1992)
Heat injury to beans in Colorado. *Phytopath.* 10: 365-367.
- _____. and G. A. Meckstroth. 1925. (1993)
The critical temperature for infection of the potato seed piece by *Fusarium oxysporum*. *Jour. Agr. Res.* 31: 917-921.
- Macouh, W. T. 1908. (1994)
Winter injury to fruit trees. *Canada Exp. Farms Rept.*, 110-116.
- _____. 1909. (1995)
Overcoming winter injury. *Proc. Amer. Soc. Hort. Sci.* 6: 15-27.
- _____. 1916. (1996)
The apple in Canada, its cultivation and improvement. *Cent. Exp. Farms Canada Bull.* 86, 1-136.
- _____. 1918. (1997)
Winter injury in Canada. *Proc. Amer. Soc. Hort. Sci.* 15: 13-17.
- Macrae, N. A. 1930. (1998)
Preliminary report on studies of loose smut of barley. *Proc. Canadian Phytopath. Soc.*, 1929, 44-47.
- Magee, C. J. P. 1927. (1999)
Investigation on the bunchy top disease of banana. *Aust. Council Sci. and Indus. Res. Bull.* 30, 1-64.
- Magistad, O. C. 1925. (2000)
The aluminum content of the soil solution and its relation to soil reaction and plant growth. *Soil Sci.* 20: 181-225.
- _____. and E. Truog. 1925. (2001)
The influence of fertilizers in protecting corn against freezing. *Jour. Amer. Soc. Agron.* 17: 517-526.
- Magness, J. R. 1928. (2002)
Winter injury of apple trees. *Wash. Agr. Exp. Sta. Bull.* 229, 34.
- _____. 1929. (2003)
Collar rot of apple trees. *Wash. Agr. Exp. Sta. Bull.* 236, 1-18.
- Mains, E. B. 1915. (2004)
Some factors concerned in the germination of rust spores. *Mich. Acad. Sci. Rept.* 17: 136-140.
- _____. 1917. (2005)
The relation of some rusts to the physiology of their hosts. *Amer. Jour. Bot.* 4: 179-220.
- _____. and D. Thompson. 1928. (2006)
Studies on snapdragon rust, *Puccinia antirrhini*. *Phytopath.* 18: 150. (Abst.).
- Maire, R. 1898. (2007)
Note sur le développement saprophytique et sur la structure cytologique des sporidies levées chez l'*Ustilago maydis*. *Bull. Soc. Mycol. France* 14: 161-173.
- Maiwald, K. 1926. (2008)
Chlorosis grüner Pflanzen als Folge des Nährstoffverhältnisses im Boden. *Actes IV Conf. Intern. Pedol., Rome, 1924* (3), 618.
- Major, T. G. 1923. (2009)
Cultural characteristics of certain species of *Fusarium*. *Quebec Soc. Prot. Plants Ann. Rept.* 15, 79-88.
- Makemson, W. K. 1918. (2010)
The leaf mold of tomato, caused by *Cladosporium fulvum* Cke. *Mich. Acad. Sci. Rept.* 20: 309-350.
- Malherbe, I. de V. 1929. (2011)
Chlorotic diseases of fruit trees. Their causes and remedies. *Farming in So. Africa, Pretoria*, 4: 49-50, 54.
- Mandelson, L. F. 1927. (2012)
Black root-rot of tobacco in N. S. Wales. *Agr. Gaz. N. S. Wales* 38: 523-531.
- Maneval, W. E. 1922. (2013)
Germination of teliospores of rust at Columbia, Missouri. *Phytopath.* 12: 471-488.
- _____. 1927. (2014)
Further germination tests with teliospores of rusts. *Phytopath.* 17: 491-498.
- Mangin, L. 1895. (2015)
Sur l'aération du sol dans les promenades et plantations de Paris. *Compt. Rend. Acad. Sci. (Paris)* 120: 1065-1068.

- _____. 1896. (2016)
Études sur la végétation dans ses rapports avec l'aération du sol. *Ann. Sci. Agron.* 2: 1-69.
- _____. 1901. (2017)
Influence de la raréfaction produite dans la tige sur la formation de thylls gommeuses. *Compt. Rend. Acad. Sci. (Paris)* 133: 305-307.
- _____. 1914. (2018)
La question du piétin. *Jour. Agr. Prat.* 27 (8): 236-239.
- _____. 1919. (2019)
L'action nocive des émanations de l'usine de Chedde. *Min. Agr. France, Ann. Serv. Épiphyties* 6: 187-199.
- Mann, C. E. T. 1925. (2020)
The physiology of the nutrition of fruit trees. I. Some effects of calcium and potassium starvation. *Univ. Bristol Agr. and Hort. Res. Sta. Ann. Rept., 1924*, 30-45.
- Mann, H. B. 1930. (2021)
Availability of manganese and of iron as affected by applications of calcium and magnesium carbonates to the soil. *Soil Sci.* 30: 117-141.
- Mann, H. H. et al. 1921. (2022)
Investigations on potato cultivation in Western India. *Bombay Dept. Agr. Bull.* 102, 84-142.
- _____. and C. M. Hutchinson. 1907. (2023)
Cephalerosus virescens, Kunze: The "red rust" of tea. *Mem. Dept. Agr. India, Bot. Ser.* 1 (6): 1-33.
- _____. and S. D. Nagpurkar. 1922. (2024)
Further investigations on the Fusarium blights of potatoes in Western India. *Agr. Jour. India* 17: 564-576.
- Manns, T. F. 1909. (2025)
The blade blight of oats—a bacterial disease. *Ohio Agr. Exp. Sta. Bull.* 210, 91-167.
- _____. 1911. (2026)
The Fusarium blight (wilt) and dry rot of the potato. *Ohio Agr. Exp. Sta. Bull.* 229, 299-336.
- _____. 1915. (2027)
Some new bacterial diseases of legumes and the relationship of the organisms causing the same. *Del. Agr. Exp. Sta. Bull.* 108, 1-41.
- _____. 1922. (2028)
Soil bacteriology. *Del. Agr. Exp. Sta. Ann. Rept., Bull.* 133, 35-36.
- _____. 1922. (2029)
Fungus disease and other seasonal conditions for 1921. *Trans. Penin. Hort. Soc.* 35: 140-144.
- _____. and J. F. Adams. 1927. (2030)
Department of Plant Pathology. *Del. Agr. Exp. Sta. Bull.* 152, 40-51.
- Manschke, R. 1928. (2031)
Die Bedeutung des Säuregrads des Bodens für den Pflanzenbau. *Die Kranke Pflanze* 5: 182-185.
- _____. 1929. (2032)
Schädliche Wirkung des bituminösen Strassenstaubs auf die Vegetation. *Die Kranke Pflanze* 6: 23-25.
- Manshard, E. 1927. (2033)
Krankheiten und Schädlinge im Saatbeet der forstlich wichtigsten Holzarten. *Mitt. Deut. Dendrol. Ges.*, 198-229.
- _____. 1927. (2034)
Der Wert der rechtzeitigen Erkennung von Hafererkrankung aus sauren Boden. *Illus. Landw. Zeit.* 47: 506-507.
- Maquenne, L. and E. Demoussy. 1920. (2035)
Sur la toxicité du fer et les propriétés antitoxiques du cuivre vis-à-vis des sels ferreux. *Compt. Rend. Acad. Sci. (Paris)* 171: 218-222.
- _____. and _____. 1920. (2036)
La cuivre dans la terre et les plantes. *Bull. Soc. Chim. France, Ser. 4*, 27: 266-278.
- Marais, E. N. 1914. (2037)
Notes on some effects of extreme drought in Waterberg, South Africa. *Jour. Dept. Agr. So. Africa* 7: 161-170.
- Marchal, E. 1902. (2038)
De l'immunisation de la Laitue contre le Meunier. *Compt. Rend. Acad. Sci. (Paris)* 135: 1067-1068.

- _____. 1903. (2040)
Recherches sur la rouille des céréales. Bull. Agr. Belg. 19: 114-153.
- _____. 1903. (2041)
Recherches sur la rouille des céréales. Bruxelles.
- _____. 1925. (2042)
Immunité et prédisposition des plantes vis-à-vis des parasites végétaux. Rev. Bot. Appl. et Agr., Colon, 5: 177-182.
- _____. 1925. (2043)
Éléments de pathologie végétale appliquée à l'agronomie et à la sylviculture. Gembloux.
- _____. 1929. (2044)
Les maladies cryptogamiques de la Betterave. Sucrierie Belge 48: 449-457.
- Marguerite-Delarchallonnay, P. 1890. (2045)
La chlorose et le sulfate de fer terrains à chlorose sinéferreuse. Jour. Agr. Prat. 1: 851-855.
- Marloth, R. 1925. (2046)
I. Further investigations into the causes producing rosette of apricot and plum trees in the Wellington district. Dept. Agr. So. Africa Sci. Bull. 42, 1-23.
- Marloth, R. H. 1929. (2047)
Hydrogen-ion concentration studies on *Penicillium italicum* and *P. digitatum*. Phytopath. 19: 1142. (Abst.).
- Marsh, R. P. and J. W. Shive. 1925. (2048)
Adjustment of iron supply to requirements of soy bean in solution culture. Bot. Gaz. 79: 1-27.
- Martin, H. 1930. (2049)
The defoliation of gooseberries by sulphur-containing sprays. Jour. S. E. Agr. Coll., Wye, Kent, 27: 182-185.
- Martin, J. P. 1928. (2050)
Control of eye spot disease. Hawaiian Planters' Rec. 32: 391-394.
- _____. and H. A. Lee. 1926. (2051)
The effect of drying on the eye spot fungus. Hawaiian Planters' Rec. 30: 475-476.
- Martin, W. H. 1920. (2052)
The influence of sulfur on soil acidity and the control of potato scab. N. J. Agr. Exp. Sta. Ann. Rept. 41, 590-598.
- _____. 1920. (2053)
The relation of sulfur to soil acidity and to the control of potato scab. Soil Sci. 9: 398-408.
- _____. 1922. (2054)
The influence of the source of nitrogen on the prevalence of potato scab. N. J. Agr. Exp. Sta. Ann. Rept. 43, 596-599.
- _____. 1923. (2055)
Late blight of potatoes and the weather. N. J. Agr. Exp. Sta. Bull. 384, 1-23.
- _____. 1923. (2056)
Influence of soil moisture and acidity on the development of potato scab. Soil Sci. 16: 69-73.
- _____. 1930. (2057)
Plant pathology at the New Jersey Stations. N. J. Agr. Exp. Sta. Ann. Rept. 51, 45, 46-51, 235-254.
- _____. et al. 1929. (2058)
Plant pathology. N. J. Agr. Exp. Sta. Ann. Rept. 50, 39-43.
- _____. and E. S. Clark. 1928. (2059)
Apple scab studies. N. J. Agr. Exp. Sta. Ann. Rept., 1927, 218-221.
- Massee, G. 1903-1904. (2060)
On a method for rendering cucumber and tomato plants immune against fungus parasites. Jour. Roy. Hort. Soc., London, 28: 142-145.
- _____. 1904. (2061)
The origin of parasitism in fungi. Jour. Bd. Agr., London, 11: 152-154. (Abst.).
- _____. 1909. (2062)
Injuries to plants due to hail and frost. Roy. Bot. Garden, Kew, Bull. Misc. Inform. 2, 53-55.
- Massey, L. M. 1926. (2063)
Fusarium rot of gladiolus corms. Phytopath. 16: 509-523.
- _____. 1928. (2064)
Dry rot of gladiolus corms. Phytopath. 18: 519-529.

- Massey, R. E. 1927. (2065)
On the relation of soil temperature to angular leaf-spot of cotton. *Ann. Bot.* 41: 497-507.
- _____. 1928. (2066)
Work of the section of Plant Physiology and Pathology. *Sudan Agric. Res. Repts.*, 1926-1927, 120-142.
- _____. 1929. (2067)
Blackarm disease of cotton. The development of *Pseudomonas malvacearum* E. F. Smith within the cotton plant. *Empire Cotton Growing Rev.* 6: 124-153.
- Matruchot, L. and M. Molliard. 1903. (2068)
Sur le *Phytophthora infestans*. *Ann. Mycol.* 1: 540-548.
- Matsumoto, T. 1921. (2069)
Studies in the physiology of fungi. XII. Physiological specialization in *Rhizoctonia solani* Kuhn. *Ann. Mo. Bot. Gard.* 8: 1-62.
- _____. 1923. (2070)
Further studies on the physiology of *Rhizoctonia solani* Kuhn. *Bull. Imp. Col. Agr. and Forestry Japan* 5: 1-63.
- _____. 1924. (2071)
Physiological studies on *Gloeosporium* with special reference to the strains obtained from apple and cherry. *Bull. Imp. Col. Agr. and Forestry Japan* 8: 15-50.
- _____. 1928. (2072)
On the sclerotial fungus accompanied by the so-called winter injury of barley, wheat and rye. (Japanese). *Jour. Plant Protection* 15: 1-6.
- _____. 1928. (2073)
Beobachtungen über Sporenbildungen des Pilzes *Cercosporina kikuchii*. *Ann. Phytopath. Soc. Japan* 2: 65-69.
- Matsuura, I. 1927. (2074)
Comparative studies on four *Hyphomycetes* pathogenic to rice seedlings. *Jour. Microbiol. Soc.* 21: 1551-1572.
- Matthews, C. D. 1927. (2075)
Lettuce investigations. *N. C. Agr. Exp. Sta. Ann. Rept.* 50, 86-87.
- Maubeuge, R. 1927. (2076)
Düngung und Rostbefall. *Zeitschr. Landw. Neiderschles.* 31: 1247-1248.
- Maximow, N. A. 1914. (2077)
Experimentelle und kritische Untersuchungen über das Gefrieren und Erfrieren der Pflanzen. *Jahrb. Wiss. Bot.* 53: 327-420.
- Mayer, A. 1886. (2078)
Ueber die Mosaickrankheit des Tabaks. *Landw. Vers. Sta.* 32: 450-467.
- Maynard, J. G. and R. W. Marsh. 1929. (2079)
Spraying trials against apple scab at Long Ashton in 1928. *Ann. Rept. Agr. and Hort. Res. Sta., Long Ashton, Bristol*, 1928, 112-123.
- Mazé, P. 1911. (2080)
Sur la chlorose expérimentale du maïs. *Compt. Rend. Acad. Sci. (Paris)* 153: 902-905.
- _____. 1914. (2081)
Note sur les chloroses des végétaux. *Compt. Rend. Soc. Biol. (Paris)* 77: 539-541.
- _____, Rout, and Lemoigne. 1912. (2082)
Recherches sur la chlorose végétale provoquée par le carbonate de calcium. *Compt. Rend. Acad. Sci. (Paris)* 155: 435-437.
- _____, _____, and _____. 1913. (2083)
Chlorose calcaire des plantes vertes. Rôle des excréments des racines dans l'absorption du fer des sols calcaires. *Compt. Rend. Acad. Sci. (Paris)* 157: 495-498.
- McAdie, A. G. 1913. (2084)
Report on recent destructive frosts in California. *U. S. Dept. Agr., Mo. Weather Rev.* 41: 120-122.
- McAlpine, D. 1902. (2085)
Bitter pit and crinkle of the apple. *Jour. Dept. Agr. Victoria* 1: 910-912.
- _____. 1904. (2086)
Black spot of the apple. *Dept. Agr. Victoria Bull.* 7, 1-32.
- _____. 1906. (2087)
The rusts of Australia. Melbourne.
- _____. 1909. (2088)
Experiments relating to rust and smut resistance. *Jour. Dept. Agr. Victoria* 7: 255-260.
- _____. 1911. (2089)
Handbook of fungous disease of the potato in Australia and their treatment. Melbourne.

-
- _____. 1911-1912. (2090)
Bitter pit investigation. The past history and present position of the bitter pit question. Prog. Rept. Bitter Pit Invest. Aust. 1: 1-197.
-
- _____. 1912-1913. (2091)
The cause of bitter pit: Its contributing factors, together with an investigation of susceptibility and immunity in apple varieties. Prog. Rept. Bitter Pit Invest. Aust. 2: 1-224.
-
- _____. 1914-1915. (2092)
Bitter pit investigations—the experimental results in their relation to bitter pit and a general summary of the investigation. Rept. Bitter Pit Invest. Aust. 4: 1-178.
-
- _____. 1915-1916. (2093)
Bitter-pit investigation. The cause and control of bitter pit. Rept. Bitter Pit Invest. Aust. 5: 1-144.
-
- McCall, A. G. and J. R. Haag. 1921. (2094)
The relation of the hydrogen-ion concentration of nutrient solutions to growth and chlorosis of wheat plants. Soil Sci. 12: 69-77.
-
- McCallum, W. B. 1909. (2095)
Plant physiology and pathology. Ariz. Agr. Exp. Sta. Ann. Rept. 20, 583-586.
-
- McCleery, F. C. 1929. (2096)
Exanthema of citrus in New South Wales. Agr. Gaz. N. S. Wales 40: 397-406.
-
- McClelland, E. H. 1913. (2097)
Bibliography of smoke and smoke prevention. Mellon Inst. Ind. Res. Bull. 2, 1-164.
-
- McClintock, J. A. 1917. (2098)
Sweet-potato diseases. Va. Truck Exp. Sta. Bull. 22, 455-486.
-
- McConnell, P. 1902. (2099)
The elements of agricultural geology. A scientific aid to practical farming. London.
-
- McCool, M. 1913. (2100)
The action of certain nutrient and nonnutrient bases on plant growth. N. Y. (Cornell) Agr. Exp. Sta. Mem. 2, 115-216.
-
- McCready, S. B. 1907. (2101)
Injurious fungus diseases of the year 1907. Ont. Agr. Col. and Exp. Farm Ann. Rept. 33, 48-49.
-
- McCubbin, W. A. 1915. (2102)
Report of St. Catharines Field Laboratory. Cent. Exp. Farm Rept., Canada, 2, 966-988.
-
- _____. 1916. (2103)
Report of St. Catharines Field Laboratory. Cent. Exp. Farm Rept., Canada, 3, 1134-1144.
-
- _____. 1925. (2104)
Winter injury. Forest Leaves 20: 4-5.
-
- _____. 1926. (2105)
Metal poisoning in peaches. Proc. Penn. Acad. Sci. 1: 58-59.
-
- McCue, C. A. and W. C. Pelton. 1913. (2106)
Tomatoes for the canning factory. Del. Agr. Exp. Sta. Bull. 101, 1-86.
-
- McCulloch, L. 1911. (2107)
A spot disease of cauliflower. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 225, 1-15.
-
- _____. 1920. (2108)
Basal glumerot of wheat. Jour. Agr. Res. 18: 543-551.
-
- _____. 1924. (2109)
A bacterial blight of gladioli. Jour. Agr. Res. 27: 225-229.
-
- _____. 1924. (2110)
A leaf and corm disease of gladioli caused by *Bacterium marginatum*. Jour. Agr. Res. 29: 159-177.
-
- _____. 1925. (2111)
Aplanobacter insidiosum n. sp., the cause of an alfalfa disease. Phytopath. 15: 496-497.
-
- _____. 1929. (2112)
A bacterial leaf spot of horse-radish caused by *Bacterium campestris* var. *armoraciae* n. var. Jour. Agr. Res. 38: 269-287.
-
- _____. and C. Thom. 1923. (2113)
A corm rot of gladiolus caused by a *Penicillium*. Phytopath. 18: 151. (Abst.).
-
- _____. and _____. 1928. (2114)
A rot of gladiolus corms caused by *Penicillium gladioli* L. McC. and Thom. Jour. Agr. Res. 36: 217-224.
-
- McDonald, J. 1929. (2115)
Notes on diseases of Coffee in Kenya. Kenya Dept. Agr. Bull. 7 H, 1-3.

- McGeorge, W. T. 1923. (2116)
The chlorosis of pineapple plants grown on manganiferous soils. *Soil Sci.* 16: 269-274.
- _____. 1924. (2117)
Soil acidity: Its relation to root rot. *Hawaiian Planters' Rec.* 28: 321-324.
- _____. 1925. (2118)
The influence of aluminum, manganese and iron salts upon the growth of sugar cane, and their relation to the infertility of acid Island soils. *Hawaiian Sugar Planters' Assoc. Exp. Sta., Agr. and Chem. Ser. Bull.* 49, 1-95.
- _____. 1926. (2119)
A review of soil investigations pertaining to growth failure of sugar cane. *Hawaiian Planters' Rec.* 30: 259-266.
- _____. 1926. (2120)
Pahala blight and a comparison with other forms of sugar cane chlorosis. *Hawaiian Planters' Rec.* 30: 293-328.
- _____. 1926. (2121)
Growth failure on acid soils. *Planter and Sugar Mfg.* 77: 408-409.
- _____. 1930. (2122)
Pahala blight. II. *Hawaiian Planters' Rec.* 34: 17-23.
- McGinty, R. A. and R. C. Thompson. 1926. (2123)
Preliminary notes on tip-burn of lettuce. *Proc. Amer. Soc. Hort. Sci.* 27: 341-346.
- McHargue, J. S. 1923. (2124)
Effect of different concentrations of manganese sulfate on the growth of plants in acid and neutral soils and the necessity of manganese as a plant nutrient. *Jour. Agr. Res.* 24: 781-794.
- _____. 1926. (2125)
Manganese and plant growth. *Jour. Indus. and Engin. Chem.* 18: 172-175.
- McKay, M. B. 1921. (2126)
Blossom-end rot of tomatoes. *Ore. Agr. Exp. Sta., Crop Pest and Hort. Rept.*, 1915-20 (3), 185-186.
- McKenna. 1918. (2127)
The importance of soil ventilation. *Agr. Jour. India* 13: 148-151.
- McKenney, R. E. B. 1910. (2128)
The Central American banana blight. *Science* 31: 750-751.
- McKinney, H. H. 1922. (2129)
The Helminthosporium disease of wheat and the influence of soil temperature on seedling infection. *Phytopath.* 12: 28. (Abst.).
- _____. 1923. (2130)
Influence of soil temperature and moisture on infection of wheat seedlings by *Helminthosporium sativum*. *Jour. Agr. Res.* 26: 195-217.
- _____. 1925. (2131)
Foot-rot diseases of wheat in America. *U. S. Dept. Agr., Dept. Bull.* 1347, 1-40.
- _____. 1927. (2132)
Factors affecting certain properties of a mosaic virus. *Jour. Agr. Res.* 35: 1-12.
- _____. and R. J. Davis. 1925. (2133)
Preliminary environmental studies on the take-all disease of wheat caused by *Ophiobolus graminis* Sacc. *Phytopath.* 15: 494-495.
- _____. and _____. 1925. (2134)
Influence of soil temperature and moisture on infection of young wheat plants by *Ophiobolus graminis*. *Jour. Agr. Res.* 31: 827-840.
- McLarty, H. R. 1928. (2135)
Some observations on physiological diseases in apple in British Columbia. *Sci. Agr.* 8: 636-650.
- _____. 1929. (2136)
Report of the Dominion Field Laboratory of Plant Pathology, Summerland, B. C. *Canada Dept. Agr., Rept. of Dominion Botanist*, 1928, 142-162.
- McLean, F. T. and B. E. Gilbert. 1925. (2137)
Manganese as a cure for a chlorosis of spinach. *Science* 61: 636-637.
- _____. and _____. 1927. (2138)
The relative aluminum tolerance of certain crop plants. *Soil Sci.* 24: 163-175.
- _____. and _____. 1928. (2139)
Aluminum toxicity. *Plant Physiol.* 3: 293-302.
- McMurrin, S. M. 1914. (2140)
The anthracnose of the mango in Florida. *U. S. Dept. Agr., Dept. Bull.* 52, 1-15.

- _____. 1915. (2141)
Winterkilling, sunscald or sour sap of pecans. Amer. Nut Jour. 3: 82.
- _____. 1917. (2142)
Walnut blight in the eastern United States. U. S. Dept. Agr., Dept. Bull. 611, 1-7.
- _____. 1919. (2143)
Pecan rosette in relation to soil deficiencies. U. S. Dept. Agr., Dept. Bull. 756, 1-11.
- _____. 1919. (2144)
Pecan rosette in relation to soil deficiencies. Amer. Nut Jour. 10 (3): 38-39, 43.
- _____. and J. B. Demaree. 1920. (2145)
Diseases of southern pecans. U. S. Dept. Agr., Farmers' Bull. 1129, 1-22.
- McMurtrey, J. E. 1929. (2146)
Nutritional deficiency studies on tobacco. Jour. Amer. Soc. Agron. 21: 142-149.
- _____. 1929. (2147)
The effect of boron deficiency on the growth of tobacco plants in aerated and unaerated solutions. Jour. Agr. Res. 28: 371-380.
- McMurtrie, W. 1878. (2148)
On the conditions in nature which may influence or tend to the production of mildew and rot. U. S. Dept. Agr., Com. Rept., 1877, 81-89.
- McRae, W. 1916. (2149)
Abnormal leaf-fall of Hevea rubber. Planters' Chron. 11: 459-465.
- _____. 1918. (2150)
Phytophthora Meadii n. sp. on Hevea brasiliensis. Mem. Dept. Agr. India, Bot. Ser. 9: 219-273.
- _____. 1926. (2151)
Report of the imperial mycologist. Sci. Rept. Agr. Res. Inst., Pusa, 1925-1926, 54-69.
- _____. 1928. (2152)
Report of the imperial mycologist. Sci. Rept. Agr. Res. Inst., Pusa, 1927-1928, 56-70.
- _____. 1930. (2153)
Report of the imperial mycologist. Sci. Rept. Agr. Res. Inst., Pusa, 1928-1929, 51-66.
- Meacham, M. R. 1918. (2154)
Note upon the hydrogen-ion concentration necessary to inhibit the growth of four wood-destroying fungi. Science 48: 499-500.
- Mehta, K. C. 1923. (2155)
Observations and experiments on cereal rusts in the neighborhood of Cambridge, with special reference to their annual recurrence. Trans. Brit. Mycol. Soc. 8: 142-176.
- Meinecke, E. P. 1925. (2156)
An effect of drought in the forests of the Sierra Nevada. Phytopath. 15: 549-553.
- Meisner. 1927. (2157)
Fusskrankheiten bei Getreide. Illus. Landw. Zeit. 47: 445.
- Melchers, L. E. et al. 1926. (2158)
Diseases of plants. Kan. Agr. Exp. Sta. Bien. Rept., 1924-1926, 65-71.
- _____. et al. 1928. (2159)
Diseases of plants. Kan. Agr. Exp. Sta. Bien. Rept., 1926-1928, 60-67.
- _____. and M. C. Sewell. 1926. (2160)
The effect of tillage, fertilizers and rotations on the spread of wheat foot-rot. Phytopath. 16: 81. (Abst.).
- Melhus, I. E. 1911. (2161)
Experiments on spore germination and infection in certain species of Oomycetes. Wis. Agr. Exp. Sta. Res. Bull. 15, 25-91.
- _____. 1912. (2162)
The factors governing germination and infection with Phytophthora infestans. Phytopath. 2: 46. (Abst.).
- _____. 1914. (2163)
Powdery scab (Spongospora subterranea) of potatoes. U. S. Dept. Agr., Dept. Bull. 82, 1-16.
- _____. 1915. (2164)
Germination and infection with the fungus of the late blight of potato (Phytophthora infestans.). Wis. Agr. Exp. Sta. Res. Bull. 37, 1-64.
- _____. 1915. (2165)
Hibernation of Phytophthora infestans in the Irish potato. Jour. Agr. Res. 5: 71-102.
- _____. 1921. (2166)
Botany and plant pathology. Iowa Agr. Exp. Sta. Ann. Rept., 30-36.
- _____. 1924. (2167)
Basisporium dry rot of corn. Iowa Agr. Exp. Sta. Ann. Rept., 36-37.

- _____ and L. W. Durrell. 1919. (2168)
Studies on the crown rust of oats. Iowa Agr. Exp. Sta. Res. Bull. 49, 113-144.
- _____, _____, and R. S. Kirby. 1920. (2169)
Relation of the barberry to stem rust in Iowa. Iowa Agr. Exp. Sta. Res. Bull. 57, 283-325.
- _____ and _____. 1922. (2170)
Dry rot of corn. Iowa Agr. Exp. Sta. Circ. 78, 1-8.
- _____ and O. H. Elmer. 1927. (2171)
Raspberry diseases in Iowa. Iowa Agr. Exp. Sta. Circ. 105, 1-15.
- _____ and M. K. Patel. 1930. (2171a)
Study of *Peronospora trifoliorum* DeBary on species of Leguminosae. Proc. Iowa Acad. Sci. 36: 113-119.
- _____, J. Rosenbaum, and E. S. Schultz. 1916. (2172)
Spongopora subterranea and *Phoma tuberosa* on the Irish potato. Jour. Agr. Res. 7: 213-253.
- _____, F. H. Van Haltern, and D. E. Bliss. 1928. (2173)
A study of *Sclerospora graminicola* (Sacc.) Schroet. on *Setaria viridis* (L.) Beauv. and *Zea mays* L. Iowa Agr. Exp. Sta. Res. Bull. 111, 297-338.
- Melin, E. 1924. (2175)
Ueber den Einfluss der Wasserstoffionenkonzentration auf die Virulenz der Wurzelpilze von Kiefer und Fichte. Bot. Not., 1924, 38-48.
- Menchikovskiy, F. 1927. (2176)
Observation concerning the influence of sodium salts in irrigation water on citrus trees. Yedeoth, Palestine, 7-8: 355-356.
- Mengel, O. 1913. (2177)
Évolution du mildiou suivant les conditions de milieu. Compt. Rend. Acad. Sci. (Paris) 157: 292-294.
- Mercuri, S. 1927. (2178)
Marciume radicale del carciofo. Boll. R. Staz. Pat. Veg. 7: 347-364.
- Merkenschlager, F. 1921. (2180)
Die Chlorose der Lupine auf Kalkboden. Fuhling's Landw. Zeit. 70: 19-24.
- _____. 1929. (2181)
Zur Biologie der Kartoffel. II Mitteilung. Zur Pathologie der Blattrollkrankheit. Arb. Biol. Reichsanst. Land- u. Forstw. 17: 345-376.
- Mertz, W. M. 1924. (2182)
Windburning of citrus trees. Calif. Dept. Agr. Mo. Bull. 13, 46-54.
- _____. 1924. (2183)
Control factors of windburning of citrus trees. Citrus Leaves 3 (2): 1-4, 17.
- _____. 1924. (2184)
Windburning of citrus. Calif. Citrogr. 9: 85, 101, 103-105.
- Metcalfe, H. 1906. (2185)
A preliminary report on the blast of rice, with notes on other rice diseases. S. C. Agr. Exp. Sta. Bull. 121, 1-43.
- _____. 1908. (2186)
Diseases of ornamental trees. U. S. Dept. Agr. Yrbk., 1907, 483-494.
- _____. 1918. (2187)
The problem of the imported plant disease as illustrated by the white pine blister rust. Brooklyn Bot. Gard. Mem. 1, 327-333.
- Metzger, W. H. and G. Janssen. 1928. (2188)
A study of the causes of chlorosis in rice. Ark. Agr. Exp. Sta. Ann. Rept., Bull. 231, 31.
- _____ and _____. 1928. (2189)
The relation of sodium nitrate and certain other nitrogen carriers to the development of chlorosis in rice. Jour. Agr. Res. 37: 589-602.
- Meurs, A. 1928. (2190)
Wortelrot, veroorzaakt door schimmels uit de geslachten *Pythium* Pringsheim en *Aphanomyces* DeBary. (English Summary). Thesis, Univ. Utrecht. 95 pp.
- Mevius, W. 1927. (2191)
Reaktion des Bodens und Pflanzenwachstum. Naturw. u. Landw. 11: 1-153.
- Mez, C. 1908. (2192)
Der Hausschwamm und die übrigen holzzerstörenden Pilze der menschlichen Wohnungen. Dresden.
- Miani, D. 1901. (2193)
Ueber die Einwirkung von Kupfer auf das Wachstum lebender Pflanzenzellen. Ber. Deutsch. Bot. Ges. 19: 461-464.

- Milan, A. 1928. (2194)
 Il grado di recettività per la "carie" delle varietà de Frumento (II Nota). Nuovo
 Giorn. Bot. Ital. n. s. 34: 1188-1199.
- Milbraith, D. G. 1923. (2195)
 Downy mildew on lettuce in California. Jour. Agr. Res. 23: 989-993.
- Miles, H. W. and B. Thomas. 1925. (2196)
 A preliminary study of the relationship between manuring and susceptibility to disease
 in potatoes. Jour. Agr. Sci. 15: 89-95.
- Millard, W. A. 1923. (2197)
 Common scab of potatoes, Part II. Ann. Appl. Biol. 10: 70-88.
- Millen, F. H. 1917. (2198)
 Disease control and forest management. Jour. Forestry 15: 974-977.
- Miller, L. P. 1928. (2199)
 Manganese deficiency in sand cultures. Amer. Fertilizer 68 (7): 21-22.
- Miller, P. W. 1929. (2200)
 Studies of fire blight of apple in Wisconsin Jour. Agr. Res. 39: 579-621.
- Mills, J. W. 1902. (2201)
 Citrus fruit culture. Calif. Agr. Exp. Sta. Bull. 138, 1-46.
- Milovtsova, M. A. 1930. (2202)
 Life-history and development of Taphridium umbelliferarum Lagerh. et Jucl. (Prelimi-
 nary communication). (Trans. title). Morbi Plantarum 19: 15-22.
- Mirande, M. 1910. (2203)
 Les effects du goudronnage des routes sur la végétation. Compt. Rend. Acad. Sci.
 (Paris) 151: 949-952.
- Mirasol, J. J. 1920. (2204)
 Aluminum as a factor in soil acidity. Soil Sci. 10: 153-217.
- Mitchell, A. J. 1910. (2205)
 Effects of low temperatures on citrus trees and fruits. U. S. Dept. Agr., Mo. Weather
 Rev. 38: 16-17.
- Mitra, S. K. and L. N. Phukan. 1929. (2207)
 Effects of hydrogen-ion concentrations on rice cultures. Agr. Jour. India 24: 109-116
- Mix, A. J. 1916. (2208)
 Sun-scald of fruit trees, a type of winter injury. N. Y. (Cornell) Agr. Exp. Sta. Bull
 382, 233-284.
- . 1916. (2209)
 Cork, drought spot, and related diseases of the apple. N. Y. (Geneva) Agr. Exp. Sta.
 Bull. 426, 473-520.
- . 1924. (2210)
 Biological and cultural studies of *Exoascus deformans*. Phytopath. 14: 217-233.
- . 1925. (2211)
 Biological and cultural studies of *Exoascus mirabilis*. Phytopath. 15: 214-222.
- . 1925. (2212)
 The weather and peach leaf curl in eastern Kansas in 1924. Phytopath. 15: 244-245.
- and D. L. Vaughn. 1924. (2213)
 The range of toleration of hydrogen-ion concentration exhibited by *Fusarium trachei-*
philum in culture. Phytopath. 14: 63. (Abst.).
- Miyake, K. 1916. (2214)
 The toxic action of soluble aluminum salts upon the growth of the rice plant. Jour. Biol.
 Chem. 25: 23-28.
- and M. Adachi. 1922. (2215)
 Chemische Untersuchungen über die Widerstandsfähigkeit der Reisarten gegen die
 "Imochi-Krankheit". Jour. Biochem. (Tokyo) 1: 223-247.
- Mizusawa, Y. 1923. (2216)
 A bacterial rot disease of Saffrons. Ann. Phytopath. Soc. Japan 1: 1-12.
- Möbius, M. A. J. 1907. (2217)
 Die Erkältung der Pflanzen. Ber. Deutsch. Bot. Ges. 25: 65-70.
- Mogendorff, N. 1930. (2218)
 "Fern-leaf" of tomato. Phytopath. 20: 25-46.
- Mohr, K. 1898. (2219)
 Betrachtungen über die Ursachen der Chlorosebildung an grünen Blättern. Gartenwelt
 2: 569-570.
- Mokrzejcki, S. A. 1903. (2220)
 Über die innere Therapie der Pflanzen. Zeitschr. Pflanzenkr. 13: 257-265.

- Molish, H. 1897. (2221)
 Untersuchungen über das Erfrieren der Pflanzen. Jena.
- _____. 1911. (2222)
 Über Einfluss des Tabakrauches auf die Pflanze. Sitzungsber. Akad. Wiss. Wein., Abt. 1, 120: 813-838.
- Moller, A. 1904. (2223)
 Karenzerscheinungen bei der Kiefer. Zeitschr. Forst- u. Jagdw. 36: 745-756.
- Molz, E. 1907. (2224)
 Untersuchungen über die im vergangenen Winter an den Reben aufgetretenen Frostschäden. Ber. Lehr- u. Forschungs., Wein. Obst- u. Gartenbau, Geisenheim, 313-314.
- _____. 1907 and 1908. (2225)
 Untersuchungen über die Chlorose der Reben. Centbl. Bakt. 19: 461-480 and 20: 71-88, 126-149.
- _____. 1917. (2226)
 Über die Züchtung widerstandsfähiger Sorten unserer Kulturpflanzen. Zeitschr. Pflanzenzucht. 5: 121-244.
- _____. 1920. (2227)
 Die Typhula-Fäule der Zuckerrüben auf den Azoren und ihre Bekämpfung. Zeitschr. Pflanzenkr. 30: 121-139.
- _____. 1922. (2228)
 Ueber eine weitverbreitete Roggenerkrankung. Deut. Landw. Presse 49: 284.
- Monicault, P. 1922. (2229)
 L'ergot du blé. Jour. Agr. Prat. 86: 169.
- Monteith, J. 1922. (2230)
 Club root of cabbage affected by soil temperature and soil moisture. Wis. Agr. Exp. Sta. Bull. 339, 43.
- _____. 1924. (2231)
 Relation of soil temperature and soil moisture to infection by Plasmodiophora brassicae. Phytopath. 14: 25. (Abst.).
- _____. 1924. (2232)
 The relation of soil temperature and soil moisture to infection by Plasmodiophora brassicae. Jour. Agr. Res. 28: 549-561.
- _____. 1926. (2233)
 Colletotrichum trifolii and Gloeosporium caulivorum on clover. Phytopath. 16: 71-72. (Abst.).
- _____. 1926. (2234)
 Control of brown-patch in turf. Phytopath. 16: 76. (Abst.).
- _____. 1926. (2235)
 The brown patch disease of turf; its nature and control. Bull. Greens Sec., U. S. Golf Assoc. 6: 127-142.
- _____. 1928. (2236)
 Clover anthracnose caused by Colletotrichum trifolii. U. S. Dept. Agr., Tech. Bull. 28, 1-26.
- _____. and A. S. Dahl. 1928. (2237)
 A comparison of some strains of Rhizoctonia solani in culture. Jour. Agr. Res. 36: 897-903.
- Montemartini, L. 1909. (2238)
 La ruggini dei cereali in rapporto colla concimazione. Riv. Patol. Veg. 4: 53-56.
- Moore, E. S. 1924. (2239)
 The physiology of Fusarium coeruleum. Ann. Bot. 38: 137-161.
- Moore, H. C. 1926. (2240)
 Hollow heart of potatoes. Mich. Agr. Exp. Sta. Quart. Bull. 8: 114-118.
- _____. 1926. (2241)
 Hollow heart in potatoes. Mich. Acad. Sci. 6: 289-294.
- _____. 1927. (2242)
 Hollow heart of potatoes. Mich. Agr. Exp. Sta. Quart. Bull. 9 (4): 137-139.
- _____. and E. J. Wheeler. 1928. (2243)
 Further studies of potato hollow heart. Mich. Agr. Exp. Sta. Quart. Bull. 11 (1): 20-24.
- Moore, J. G. 1918. (2244)
 Winter injury to fruits in Wisconsin in 1918. Proc. Amer. Soc. Hort. Sci. 15: 31-32.
- Moore, M. H. 1930. (2245)
 The incidence and control of apple scab and apple mildew at East Malling. Jour. Pomol. and Hort. Sci. 8: 229-247.

- Moranon, J. M. 1924. (2246)
A biochemical study of resistance to mildew in *Oenothera*. *Philippine Jour. Sci.* 24: 369-441.
- Moreau, F. 1913. (2247)
Sur l'action des différentes radiations lumineuses sur la formation des conidies de *Botrytis cinerea* Pers. *Bull. Soc. Bot. France* 60: 80-82.
- . 1920. (2248)
A propos du nouveau genre *Kunkelia* Arthur. *Bull. Soc. Mycol. France* 36: 101-103.
- Moreau, L. and E. Vinet. 1914. (2249)
Influence du milieu, et des agents atmosphériques sur le développement du mildiou. *Prog. Agr. et Vitic* 62: 225-235.
- Moreillon, M. 1926. (2250)
Foudroiement des arbres. *Bull. Trimest. Soc. Forest. Franche-Comté* 16: 334-340.
- Morel, J. 1892. (2251)
Action de l'acide borique sur la germination. *Compt. Rend. Acad. Sci. (Paris)* 114: 131-133.
- Moreland, W. H. 1906. (2252)
The relation of the weather to rust on cereals. *Mem. Dept. Agr. India, Bot. Ser.* 1 (2): 53-58.
- Morgan, M. F. 1929. (2253)
Tobacco as an indicator plant in studying nutritional deficiencies of soils under greenhouse conditions. *Jour. Amer. Soc. Agron.* 21: 130-136.
- Morgenroth, E. 1929. (2254)
Beziehungen zwischen Aciditätsbestimmungen und Pflanzenwachstum. *Wiss. Arch. Landw. Pflanzenbau, Abt. A*, 1: 434-470.
- Morris, H. E. and D. B. Swingle. 1927. (2255)
Injury to growing crops caused by the application of arsenical compounds to the soil. *Jour. Agr. Res.* 34: 59-78.
- Morris, O. M. 1915. (2256)
Apple scab—Where most prevalent. *Better Fruit* 9 (8): 31-35.
- . 1914 and 1920. (2257)
Winter injury of fruit trees. *Proc. Wash. State Hort. Assoc.* 11: 38-42 and 16: 15-21.
- . 1923. (2258)
Apple rosette. *Wash. Agr. Exp. Sta. Bull.* 177, 1-30.
- Morse, F. W. 1919. (2259)
A fertilizer experiment with asparagus. *Mass. Agr. Exp. Sta. Bull.* 194, 231-257.
- . 1921. (2260)
Thirty years experience with sulfate of ammonia. *Mass. Agr. Exp. Sta. Bull.* 204, 83-98.
- Morse, W. J. 1909. (2261)
Notes on plant diseases in 1908. *Me. Agr. Exp. Sta. Bull.* 164, 1-28.
- . 1909. (2262)
Two recent epidemics of late blight and rot of potatoes in Aroostook County. *Me. Agr. Exp. Sta. Bull.* 169, 163-184.
- . 1917. (2263)
Studies upon the blackleg disease of the potato, with special reference to the relationship of the causal organisms. *Jour. Agr. Res.* 8: 79-126.
- . 1920. (2264)
Some observations upon the effect of borax in fertilizers. *Me. Agr. Exp. Sta. Bull.* 288, 89-120.
- Morstatt, H. 1923. (2265)
Einführung in die Pflanzenpathologie. *Sammlung Borntraeger*. 1: 1-159.
- . 1914-1930. (2266)
Bibliographie der Pflanzenschutzliteratur. *Biol. Reichs. Land- u. Forstw.* Berlin.
- Mottet, S. 1893. (2267)
Des effets de la fumée sur les végétaux. *Rev. Hort.* 65: 162-163.
- Mounce, I. 1929. (2268)
Studies in forest pathology. II. The biology of *Fomes pinicola* (Sw.) Cooke. *Canada Dept. Agr. Bull.* 111, 1-75.
- Mouravieff, V. P. 1928. (2269)
Interdependence of epidemics of stinking smut and meteorological factors. (Trans. title). *Mag. Seed Selection Direction Sugar Trust* 3 (11): 73-94.
- Mukerjee, J. N. 1924. (2270)
Carbon dioxide in soil gases. *Agr. Jour. India* 19: 146-154.

- Müller, E. 1928. (2271)
Die Schutzwirkung der Kalidüngung gegen Krankheiten bei Getreide und Kartoffeln.
Ernähr. Pflanze 24: 121-123.
- Müller, F. 1904. (2272)
Die Beschädigungen der Blätter und Früchte unserer Obstbäume bei der Bespritzung mit
richtig hergestellten Kupferbrühen. Zeitschr. Pflanzenkr. 14: 288-289. (Abst.).
- Müller, H. C. et al. 1911. (2273)
Schäden durch Rauch und Flugasche. Ber. Agr. Chem. Kontrollstation, Sachsen, 1910,
20-22.
- and E. Molz. *1917. (2274)
Über das Auftreten des Gelbrostes (*Puccinia glumarum*) am Weizen in den Jahren 1914
und 1916. Fuhling's Landw. Zeit. 66: 42-55.
- Müller, K. O. 1924. (2275)
Untersuchungen zur Entwicklungsgeschichte und Biologie von *Hypochnus solani* P. u.
D. (*Rhizoctonia solani* K.). Arb. Biol. Reichsanst. Land- u. Forstw. 13: 197-262.
- , 1926. (2276)
Über die wirtschaftliche Bedeutung, die Symptome, und die Bekämpfung der Kraut—und
Knollenfäule der Kartoffel. Mitt. Deut. Landw. Ges. 41: 567-571.
- Müller-Thurgau, H. 1880. (2277)
Ueber das Gefrieren und Erfrieren der Pflanzen. Landw. Jahrb. 9: 133-189.
- , 1886. (2278)
Ueber das Gefrieren und Erfrieren der Pflanzen. Landw. Jahrb. 15: 453-610.
- , 1900. (2279)
Eigentümliche Frostschäden an Obstbäumen und Reben. Zeitschr. Pflanzenkr. 10:
335-340.
- , 1901. (2280)
Beobachtungen über Hagelschäden an Obstbäumen und Reben. Zeitschr. Pflanzenkr. 11:
247-248. (Abst.).
- , 1903. (2281)
Eigentümliche Frostschäden an Obstbäumen und Reben. Zeitschr. Pflanzenkr. 13:
272-273. (Abst.).
- , 1922. (2282)
Sonnenbrandschäden bei Kernobststrüchten. Landw. Jahrb. Schweiz. 36: 814-815.
- , 1922. (2283)
Weitere Beobachtungen über die Blattbräune der Kirschbäume. Landw. Jahrb. Schweiz.
36: 822-824.
- Mulvania, M. 1926. (2284)
Studies on the nature of the virus of tobacco mosaic. Phytopath. 16: 853-871.
- Münch, E. 1909. (2285)
Untersuchungen über Immunität und Krankheitsempfänglichkeit der Holzpflanzen.
Naturw. Zeitschr. Forst- u. Landw. 7: 54-75, 87-114, 129-160.
- , 1913. (2286)
Hitzeschäden an Waldpflanzen. Naturw. Zeitschr. Forst- u. Landw. 11: 557-562.
- , 1914. (2287)
Nochmals Hitzeschäden an Waldpflanzen. Naturw. Zeitschr. Forst- u. Landw. 12:
169-188.
- , 1928. (2288)
Frostgefährdung wintergrüner Gehölze. Mitt. Deut. Dendrol. Ges. 40: 175-184.
- Muncie, J. H. 1917. (2289)
Experiments on the control of bean anthracnose and bean blight. Mich. Agr. Exp. Sta.
Tech. Bull. 38, 1-50.
- and M. K. Patel. 1930. (2290)
Studies upon a bacteriophage specific for *Pseudomonas tumefaciens*. Phytopath. 20:
289-305.
- Munerati, O. 1912. (2291)
Sulla recettività del frumento per la carie in rapporto al tempo di semina. Accad.
Lincei, Rend. Cl. Sci. Fis. Mat. e Nat. 21: 875-878.
- , 1922. (2292)
Osservazioni sulla recettività del frumento per la carie. Accad. Lincei, Rend. Cl. Sci.
Fis. Mat. e Nat. 31 (1): 125-129.
- , 1923. (2293)
Le basse temperature al momento della germinazione fanno sfuggire il grano all'attacco
della carie? Accad. Lincei, Rend. Cl. Sci. Fis. Mat. e Nat. 32: 285-289.

- Munger, T. T. 1916. (2294)
Parch blight on Douglas fir in the Pacific Northwest. *Plant World* 19: 46-47.
- Munkelt, W. 1927. (2295)
Versuche zur Stoffwechselfathologie der Kulturpflanzen. *Angew. Bot.* 9: 35-65, 82-87.
- Munn, M. T. 1912. (2296)
Lime-sulfur vs. bordeaux mixture as a spray for potatoes. N. Y. (Geneva) *Agr. Exp. Sta. Bull.* 352, 1-7.
- _____. 1915. (2297)
Lime-sulfur vs. bordeaux mixture as a spray for potatoes. III. N. Y. (Geneva) *Agr. Exp. Sta. Bull.* 397, 95-105.
- _____. 1915. (2298)
Lightning injury to onions. *Phytopath.* 5: 197.
- _____. 1917. (2299)
Neck-rot disease of onions. N. Y. (Geneva) *Agr. Exp. Sta. Bull.* 437, 363-455.
- Munson, W. M. 1903. (2300)
Experiments in orchard culture. *Me. Agr. Exp. Sta. Bull.* 89, 1-24.
- Münter, F. 1927. (2301)
Zur Bodensäure. *Deutsche Landw. Presse* 54: 15-16.
- Murphy, H. F. 1929. (2302)
Some effects of crude petroleum on nitrate production and growth. *Soil Sci.* 27: 117-120.
- Murphy, P. A. 1921. (2303)
Investigation of potato diseases. *Canada Exp. Farms Bull.* 44, 1-86.
- _____. 1922. (2304)
The bionomics of the conidia of *Phytophthora infestans* (Mont.) DeBary. *Proc. Roy. Dublin Soc.* 16: 442-466.
- _____. and R. McKay. 1926. (2305)
The downy mildew of onions (*Peronospora schleideni*), with particular reference to the hibernation of the parasite. *Proc. Roy. Dublin Soc.* 18: 237-261.
- _____. and E. J. Wortley. 1920. (2305a)
Relation of climate to the development and control of leaf roll of potato. *Phytopath.* 10: 407-414.
- Murwin, H. F. 1929. (2306)
The effects of magnesia, sulphur and chlorine on the growth and quality of tobacco. *Conn. Agr. Exp. Sta. Bull.* 299, 198-203.
- Muth, F. 1906. (2307)
Über die Beschädigung der Rebenblätter durch Kupferspritzmittel. *Zeitschr. Pflanzenkr.* 16: 289-290. (Abst.).
- _____. 1928. (2308)
Die Melanose der Amerikanerreben. *Mitt. Deut. Landw. Ges.* 43: 1063-1066.
- Nabokich, A. J. 1909. (2309)
Temporäre Anäerobiose höherer Pflanzen. *Landw. Jahrb.* 38: 51-194.
- Nakamura, M. 1903. (2310)
Can boric acid in high dilution exert a stimulant action on plants? *Bull. Col. Agr.* (Tokyo) 5: 509-512.
- Nakamura, H. 1928. (2311)
On *Septoria callistephi* Gloyer parasitic on *Callistephus chinensis*. (Japanese). *Jour. Microbiol. Soc. Japan* 22: 12.
- Nakata, K. 1930. (2312)
Comparative studies of *Bact. sesami* with *Bact. solanacearum* and *Bact. sesamicola*. *Ann. Phytopath. Soc. Japan* 2: 229-243.
- Nakatomi, S. 1927. (2313)
On the variability and inheritance of the resistance of rice plants against the rice blast disease. (Japanese). *Jap. Jour. Genetics* 4: 31-38.
- Naumoff, N. A. 1925. (2314)
Contribution to the study of clubroot of cabbage. (Trans. title). *Morbi Plantarum, Leningrad*, 14 (2-3): 1-24.
- Nash, G. V. 1916 and 1918.
Injury to evergreens. *Jour. N. Y. Bot. Gard.* 17: 179-185 and 19: 48-50, 159-164.
- Näslund, C. and K. G. Dernby. 1923. (2316)
Untersuchungen über einige physiologische Eigenschaften der Strahlenpilze. *Biochem. Zeitschr.* 137: 497-564.

- Naumann, A. 1911. (2317)
Einige Krankheiten gärtnerischer Kulturgewächse und eigenartige Frostschädigungen an Apfelfrüchten. Jahresbr. Ver. Angew. Bot. 9: 198-217.
- Naumov, N. A. 1916 and 1917. (2318)
Intoxicating bread. (Russian). Mik. i. Fitopat. 12: 1-216 and Rev. in Phytopath. 7: 384-386.
- Nazari, V. 1910. (2319)
Azione di alcune ossidisi artificiali e di diversi composti metallic sulla germinazione e sull'accrescimento della piante. Le Staz. Sper. Agr. Italiane 43: 667-686.
- Neal, D. C. 1927. (2320)
Cotton wilt: A pathological and physiological investigation. Ann. Mo. Bot. Gard. 14: 359-420.
- . 1928. (2321)
Cotton wilt: A pathological and physiological investigation. Miss. Agr. Exp. Sta. Tech. Bull. 16, 1-51.
- Neger, F. W. 1915. (2322)
Rauchwirkung, Spätfrost und Frosttrocknis und ihre Diagnostik. Thar. Forstl. Jahrb. 66: 195-212.
- . 1916. (2323)
Ueber eine durch Fruhfrost an Nectria cucurbitula und Dermatea eucrita (Korst.) verursachte gipfeldürre der Fichte. Naturw. Zeitschr. Forst. u. Landw. 14: 121-127.
- . 1919. (2324)
Ein neues, untrüglisches Merkmal für Rauchschäden bei Laubholzern. Angew. Bot. 1: 129-138.
- . 1924. (2325)
Die Krankheiten unserer Waldbaume. Stuttgart.
- Negrier, A. 1921. (2326)
Faille des vignes gelées. Rev. Vitic. 54: 315-316.
- Neilson, J. A. 1918. (2327)
Winter injury among fruit trees. Ont. Fruit Growers' Assoc. Ann. Rept. 50, 41-48.
- Neller, J. R. and W. J. Morse. 1921. (2328)
Effects upon the growth of potatoes, corn and beans resulting from the addition of borax to the fertilizer used. Soil Sci. 12: 79-131.
- Nelson, A. 1893. (2329)
The winter-killing of trees and shrubs. Wyo. Agr. Exp. Sta. Bull. 15, 213-222.
- Nelson, R. 1926. (2330)
Storage and transportation diseases of vegetables due to suboxidation. Mich. Agr. Exp. Sta. Tech. Bull. 81, 1-38.
- Neubauer, H. 1927. (2331)
Düngung und Rostbefall. Sächs. Landw. Zeit. 75: 526-527.
- Newcombe, F. C. and H. A. Lee. 1927. (2332)
The cause of sectional chlorosis of sugar cane. Hawaiian Planters' Rec. 31: 125-128.
- Newhall, A. G. 1925. (2333)
The tip burn of head lettuce. Market Growers' Jour. 36: 358-359.
- . 1928. (2334)
The relation of humidity and ventilation to the leaf mold disease of tomatoes. Ohio Agr. Exp. Sta. Bimo. Bull. 13 (3), 119-122.
- . 1930. (2335)
Control of root-knot nematode in greenhouses. Ohio Agr. Exp. Sta. Bull. 451, 1-60.
- and J. D. Wilson. 1929. (2336)
A preliminary report on forced-air ventilation for the control of Cladosporium leaf mold of greenhouse tomatoes. Phytopath. 19: 83. (Abst.).
- and ———. 1929. (2337)
Humidity and control of leaf diseases in greenhouses. Ohio Agr. Exp. Sta. Bull. 431, 64-65.
- Newman, L. H. 1922. (2338)
Smut experiments. Canada Exp. Farms, Cereal Div. Rept. 7.
- Nicolas, G. 1926. (2339)
Les rouilles du Blé a Monlon (Haute-Garonne) en 1924 et 1925. Rev. Path. Vég. et Ent. Agr. 13: 75-82.
- Niggemeyer, H. 1915. (2340)
Die Beschädigung der Vegetation durch Rauch, mit besonderer Berücksichtigung des rheinisch-westfälischen Industriegebiets. Diss. Münster.

- Nightingale, G. T. et al. 1930. (2341)
Some effects of potassium deficiency on the histological structure and nitrogenous and carbohydrate constituents of plants. N. J. Agr. Exp. Sta. Bull. 499, 1-36.
- Nilsson-Ehle, H. 1912. (2342)
Berattelse öfver förädlingsarbetena med höstvetete vid Svalöf. Sver. Utsädesf. Tidsskr. 22: 307-334.
- Nilsson-Leissner, G. 1929. (2343)
Death from low temperature and resistance of plants to cold. Quart. Rev. Biol. 4: 113-117.
- Nisikado, Y. 1923. (2344)
Effect of temperature on the growth of *Helminthosporium oryzae* (Br. D. Haan). Ann. Phytopath. Soc. Japan 1: 20-30.
- _____. 1923. (2345)
Ueber die durch *Physalospora* und *Coniothyrium* verursachten Krankheiten der Weintraube in Japan. Ber. Ohara Inst. Landw. Forsch. 2: 273-289.
- _____. 1927. (2346)
Studies on the rice blast disease. Jap. Jour. Bot. 3: 239-244.
- _____. 1928. (2347)
Determination of hydrogen-ion concentration and its application to the studies of plant disease. (Japanese). Biol. Absts. 2: 407.
- _____. 1929. (2348)
Studies on the *Helminthosporium* diseases of Gramineae in Japan. Ber. Ohara Inst. Landw. Forsch. 4: 111-126.
- _____. and C. Miyake. 1920. (2349)
Treatment of the rice seeds for *Helminthosporiose* I. Hot water treatment. Ber. Ohara Inst. Landw. Forsch. 1: 543-555.
- _____. and _____. 1922. (2350)
Studies on the *Helminthosporiose* of the rice plant. Ber. Ohara Inst. Landw. Forsch. 2: 133-194.
- _____. and _____. 1926. (2351)
Studies on the *Helminthosporium* disease of maize. Jap. Jour. Bot. 3: 35. (Abst.).
- _____. and _____. 1926. (2352)
Studies on two *Helminthosporium* diseases of maize, caused by *Helminthosporium turcicum* Passerini and *Ophiobolus heterostrophus* Drechsler (Helm. maydis Nisikado et Miyake) I to VIII. Ber. Ohara Inst. Landw. Forsch. 3: 221-266.
- Noack, F. 1905. (2354)
Über Frostblasen und ihre Entstehung. Zeitschr. Pflanzenkr. 15: 29-44.
- Noack, K., O. Wehmer, and H. Griessmeyer. 1929. (2355)
Untersuchungen über die Rauchgasschäden der Vegetation. Zeitschr. Angew. Chemie 42: 123-126.
- Nobbe, F., P. Baessler, and H. Will. 1884. (2356)
Untersuchung über die Giftwirkung des Arsen, Blei und Zink im pflanzlichen Organismus. Landw. Vers. Sta. 30: 381-423.
- Noble, R. J. 1923. (2357)
Studies on *Urocystis tritici* Koern., the organism causing flag smut of wheat. Phytopath. 13: 127-139.
- _____. 1924. (2358)
Studies on the parasitism of *Urocystis tritici* Koern., the organism causing the flag smut of wheat. Jour. Agr. Res. 27: 451-489.
- _____. 1926. (2359)
Downy mildew of wheat. Agr. Gaz. N. S. Wales 37: 204-208.
- _____. 1929. (2360)
Some observations on the relationship of soil conditions to the development of disease in plants. Rept. Aust. Assoc. Adv. Sci., 1928, 574-580.
- Nojima, T. 1930. (2361)
Studies on two different species of *Pestalozzia* parasitic on the leaves of *Diospyros kaki* L. Jap. Jour. Bot. 5: 16-17. (Abst.).
- Nolen, R. E. 1926. (2362)
Pecan scab. Fla. Agr. Exp. Sta. Ann. Rept., 70-71.
- _____. 1926. (2363)
Pecan scab. Fla. Agr. Exp. Sta. Bull. 181, 251-276.
- Nolte, O. 1923. (2364)
Beobachtungen zur sog. "Bodensäurekrankheit". Mitt. Deut. Landw. Ges. 38: 369-370.

- Norman, A. G. 1930. (2365)
The biological decomposition of plant materials. III. Physiological studies on some cellulose-decomposing fungi. *Ann. Appl. Biol.* 17: 575-613.
- North, D. S. 1929. (2366)
The bacterial-vascular diseases of sugar-cane. *Facts about Sugar* 24: 880-881.
- Norton, J. B. S. 1911. (2367)
Water core of apple. *Phytopath.* 1: 126-128.
- _____. 1916. (2368)
Internal action of chemicals on resistance of tomatoes to leaf diseases. *Md. Agr. Exp. Sta. Bull.* 192, 17-30.
- Novopokrovsky, I. V. and F. D. Skaskin. 1925. (2369)
Effect of temperature on the germination of the chlamydospores of cereal smuts (genus *Ustilago*) (Trans. title). Pamphlet of the North Caucasus Regional Land Administration Rostoff-on-Don. 1-28.
- Nowell, W. et al. 1924. (2370)
The influence of soil conditions on plant diseases. *Rept. Imperial Mycol. Conf., London*, 1: 16-17.
- Noyes, H. A. 1914. (2371)
The effect on plant growth of saturating a soil with carbon dioxide. *Science* 40: 792.
- _____. and J. H. Weghorst. 1920. (2372)
Residual effects of carbon dioxide gas additions to soils on roots of *Lactuca sativa*. *Bot. Gaz.* 69: 332-336.
- Oberholser, E. L., A. J. Wickler, and H. E. Jacob. 1923. (2373)
Factors influencing the development of internal browning of the Yellow Newton apple. *Calif. Agr. Exp. Sta. Bull.* 370, 1-40.
- O'Brien, A. A. 1902. (2374)
Notes on the comparative resistance to high temperatures of the spores and mycelium of certain fungi. *Bull. Torrey Bot. Club* 29: 170-172.
- Ocfemia, G. O. 1923. (2375)
Helminthosporium disease of rice. *Phytopath.* 13: 53. (Abst.).
- _____. 1924. (2376)
The Helminthosporium disease of rice occurring in the southern United States and in the Philippines. *Amer. Jour. Bot.* 11: 385-405.
- _____. 1924. (2377)
The relation of soil temperature to germination of certain Philippine upland and lowland varieties of rice and infection by the Helminthosporium disease. *Amer. Jour. Bot.* 11: 437-460.
- _____. 1925. (2378)
The occurrence of white rust of crucifers and its associated downy mildew in the Philippines. *Philippine Agr.* 14: 289-296.
- _____. and E. F. Roldan. 1927. (2379)
Phytophthora blight of citrus. *Amer. Jour. Bot.* 14: 1-15.
- O'Gara, P. J. 1913. (2380)
Studies on the water core of apple. *Phytopath.* 3: 121-128.
- _____. 1916. (2381)
A bacterial disease of western wheat-grass, *Agropyron smithii*. *Phytopath.* 6: 341-350.
- _____. 1918. (2382)
The white-spot disease of alfalfa. *Science* 48: 299-301.
- Ogilvie, L. 1928. (2383)
Report of the plant pathologist for the year 1927. *Dept. Agr. Bermuda Ann. Rept.*, 1927, 26-37.
- _____. 1928. (2384)
"Black tip", a finger-tip disease of the Chinese banana in Bermuda. *Phytopath.* 18: 531-538.
- _____. 1930. (2385)
Observations on the disease of market-garden crops in the Vale of Evesham. *Ann. Rept. Agr. and Hort. Res. Sta., Long Ashton, Bristol*, 1929, 149-154.
- Oliver, F. W. 1891. (2386)
Upon the effects of urban fog upon cultivated plants. *Agr. Sci.* 5: 133-135. (Abst.).
- _____. 1893. (2387)
Ueber die Wirkungen des Stadtnebels auf kultivierte Pflanzen. *Fortsch. Gebeit. Agr. Phys.* 16: 496-497. (Abst.).

- _____ et al. 1894. (2388)
On the effects of urban fog upon cultivated plants. Jour. Roy. Hort. Soc., London, 16: 1-59.
- Olsen, C. 1923. (2389)
Studies on the hydrogen ion concentration of the soil and its significance to the vegetation, especially to the natural distribution of plants. Compt. Rend. Lab., Carlsberg, 15: 1-166.
- Opitz. 1920. (2390)
Fusariumbefall und auswinterung verschiedener Winterweizensorten. Mitt. Deut. Landw. Ges. 35: 488-489.
- Orr, H. B. 1907. (2391)
Experiments with tomato blight. N. W. Horticulturist 20: 3-4.
- Orton, C. R. 1916. (2392)
Meteorology and late blight of potatoes. Phytopath. 6: 107. (Abst.).
- _____ and J. F. Adams. 1915. (2393)
Collar-blight and related forms of fire-blight. Pa. Agr. Exp. Sta. Bull. 136, 1-23.
- Orton, W. A. 1910. (2394)
Cotton wilt. U. S. Dept. Agr., Farmers' Bull. 333, 1-24.
- _____. 1911. (2395)
The development of disease resistant varieties of plants. Intern. Conf. Génétique (Paris) 4: 247-265.
- _____. 1913. (2396)
Environmental influences in the pathology of *Solanum tuberosum*. Jour. Wash. Acad. Sci. 3: 180-190.
- _____. 1914. (2397)
The biological basis of international phytopathology. Phytopath. 4: 11-19.
- _____. 1926. (2398)
Botanical problems of American tropical agriculture. Bull. Torrey Bot. Club 53: 67-75.
- Oskamp, J. 1918. (2399)
Winter injury of fruit trees. Ind. Agr. Exp. Sta. Circ. 87, 1-11.
- _____. 1918. (2400)
Winter injury in Indiana. Proc. Amer. Soc. Hort. Sci. 15: 25-30.
- _____. 1926. (2401)
Apple scald. Proc. N. Y. State Hort. Assoc., 191-196.
- Oskierski, H. U. 1927. (2402)
Untersuchungen über die Beziehungen zwischen Bodenreaktion und Pflanzenwachstum. Bot. Arch. 20: 22-42.
- Osner, G. A. 1916. (2403)
Leaf smut of timothy. N. Y. (Cornell) Agr. Exp. Sta. Bull. 381, 291-332.
- _____. 1918. (2404)
Stemphylium leafspot of cucumbers. Jour. Agr. Res. 13: 295-306.
- Ost, H. 1896. (2405)
Untersuchung von Rauchschiiden. Chem. Zeit. 20: 165-171.
- Osterhout, W. J. V. 1908. (2406)
On the effects of certain poisonous gases on plants. Univ. Calif. Publ. in Bot. 3: 339-340.
- Osterwalder, A. 1926. (2407)
Die Fleckenbildung beim Jonathan Apfel (Jonathan spot). Zeitschr. Pflanzenkr. 36: 264-269.
- _____. 1928. (2408)
Von der Gelbsucht der Rebe. Schweiz. Zeitschr. Obst- u. Weinbau 37: 105-113.
- _____. 1929. (2409)
Winterfrostschiiden an Reben und Obstbäumen in der mittleren Zürichseegegend. Schweiz. Zeitschr. Obst- u. Weinbau 38: 281-298.
- Otto, R. 1904. (2410)
Über durch kochsalzhaltiges Abwasser verursachte Pflanzen-schiidigungen. Zeitschr. Pflanzenkr. 14: 136-140, 262-263.
- Owen, O. 1929. (2411)
The occurrence of chlorates in a tomato soil. Jour. Pomol. and Hort. Sci. 7: 270-275.
- Owens, C. E. 1928. (2412)
Principles of plant pathology. New York.
- Owens, J. S. 1925. (2413)
Pollution of the atmosphere by smoke. Gardeners' Chron. 77: 230.

- Paasch, E. 1930. (2414)
Ursache und Bekämpfung der Herz- und Trochenfäule. Centralbl. f. Zuckerind. 38: 403-405.
- Paddock, W. 1900. (2415)
The New York apple-tree canker. N. Y. (Geneva) Agr. Exp. Sta. Bull. 185, 207-213.
- _____. 1902. (2416)
Plant diseases of 1901. Colo. Agr. Exp. Sta. Bull. 69, 1-23.
- _____. 1904. (2417)
Large potato vines and no potatoes. Colo. Agr. Exp. Sta. Bull. 92, 1-8.
- _____. 1918. (2418)
Winter injury in Ohio. Proc. Amer. Soc. Hort. Sci. 15: 30-31.
- _____. and O. B. Whipple. 1910. (2419)
Fruit growing in arid regions. 395 pp. New York.
- Paine, S. G. 1917. (2420)
Studies in bacteriosis. I. "Blackleg" of the potato. Jour. Agr. Sci. 8: 480-494.
- _____. and W. F. Bewley. 1919. (2421)
Studies in bacteriosis. IV. "Stripe" disease of tomato. Ann. Appl. Biol. 6: 183-202.
- _____. and J. M. Branfoot. 1924. (2422)
Studies in bacteriosis. XI. A bacterial disease of lettuce. Ann. Appl. Biol. 11: 312-317.
- _____. and H. Chaudhuri. 1923. (2423)
The blackleg disease of the potato. On the relationship of *Bacillus atrosepticus* and *Bacillus solanisaprus*. Phytopath. 13: 359-361.
- _____. and M. S. Lacey. 1923. (2424)
Studies in bacteriosis IX. "Streak disease of broad beans." Ann. Appl. Biol. 10: 194-203.
- _____. and H. Stansfield. 1919. (2424a)
A bacterial leaf-spot of *Protea cynaroides*, exhibiting a host reaction of possibly bacteriolytic nature. Ann. Appl. Biol. 6: 27-39.
- Palmer, W. B. 1921. (2425)
Pecan rosette. Proc. Ann. Conv. Nat'l Nut Growers' Assoc. 20: 72-78.
- Palo, M. A. 1923. (2426)
A *Fusarium* causing bulb rot of onion in the Philippines. Philippine Agr. 17: 301-316.
- Pammel, L. H. 1890. (2427)
Cotton root-rot. Texas Agr. Exp. Sta. Bull. 7, 61-92.
- _____. 1904. (2428)
Some unusual fungus diseases in Iowa during the summer of 1903. Proc. Soc. Prom. Agr. Sci. 25: 144-156.
- _____. 1906. (2429)
Some phytopathological problems. Proc. Soc. Prom. Agr. Sci. 27: 76-81.
- _____. 1914. (2430)
Recent literature on fungus diseases of plants. Trans. Iowa Hort. Soc. 49: 222-241.
- _____. 1915. (2431)
Report on fungus disease of plants for 1914. Iowa Weather and Crop Service Report, 1914, 64-69.
- _____. 1917. (2432)
Fungus diseases of plants for 1916. Iowa Agr. Yrbk. 17: 574-578.
- _____. 1921. (2433)
Corn ear mold. Iowa Agr. Exp. Sta. Ann. Rept., 31-32.
- _____. 1928. (2434)
Some notes on frost injury to plants in Iowa in 1928. Rept. Iowa State Hort. Soc. 53: 39-41.
- _____. and C. M. King. 1909. (2435)
Notes on factors in fungus diseases of plants with records of occurrences of plant diseases at Ames for a period of 25 years. Proc. Iowa Acad. Sci. 16: 41-97.
- Pantaneli, E. 1914. (2436)
Osservazione su la recettività della quercia per l'oidio. Bull. Orto Bot. R., Univ. Napoli, 4: 309-348.
- _____. 1918. (2437)
Su la resistenza delle piante al freddo. Atti. R. Accad. Lincei, Rend. Cl. Sci. Fis. Mat. e Nat. 27: 126-130, 148-153.
- _____. 1920. (2438)
Contributi alla biologia della *Peronospora* della vite. Riv. Patol. Veg. 10: 51-72.

- _____. 1921. (2439)
Sui rapporti fra nutrizione e recettività per la ruggine. Riv. Patol. Veg. 11: 86-84.
- _____. 1921. (2440)
Contributions à la biologie du mildiou de la vigne. Prog. Agr. et Vitic. 42: 87-89, 111-115, 161-165.
- _____. 1921. (2441)
Selezione e creazione di piante resistenti alle malattie. Riv. Biol. 3: 172-198, 319-336.
- Panton, J. H. 1888. (2442)
Rust (*Puccinia graminis*). Ont. Agr. Col. Bull. 36, 1-6.
- _____. 1896. (2443)
Pea blight. Ont. Agr. Col. and Exp. Farm Ann. Rept., 13-15.
- Parfentjev, J. A. and F. Wilcoxon. 1929. (2444)
Laubbeschädigung durch Spritzungen mit Kalzium Arsenit und Kalzium Arsenat. Anzieg. Schädlingkunde 5: 107-112, 123-129.
- Parish, S. B. 1910. (2445)
The effect of cement dust on citrus trees. Plant World 13: 288-291.
- Parisot, M. 1926. (2446)
Le piétin du blé. Compt. Rend. Acad. Agr. France 12: 565-569.
- Park, M. 1927. (2447)
Notes on some physiological conditions affecting the parasitism of *Rhizoctonia solani* Kühn. Ceylon Dept. Agr. Yrbk., 47-48.
- _____. 1927. (2448)
Some investigations into conditions affecting the parasitism of *Rhizoctonia solani* Kühn. Ann. Roy. Bot. Gard., Peradeniya, 10: 259-273.
- _____. 1928. (2449)
Investigation of root diseases of coconuts. Trop. Agriculturist 70: 402-407.
- Parker, T. 1926. (2450)
The control of damping off. Gardeners' Chron. 79: 309.
- Parr, A. E. 1912. (2451)
Drainage and soil aeration. Agr. Jour. India 7: 371-372.
- Partridgeon, G. 1887. (2452)
Le mildiou. (*Peronospora viticola*). Paris.
- Pasquali, A. 1928. (2453)
Osservazioni su binomia "frumento gelo". Gior. Agr. Domenica 38 (8): 74.
- Patel, M. K. 1926. (2454)
Study of *Peronospora trifoliorum* DeBy. on species of Leguminosae. Phytopath. 16: 72. (Abst.).
- Patten, A. J. and P. O'Meara. 1919. (2455)
The probable cause of injury reported from the use of calcium and magnesium arsenates. Mich. Agr. Exp. Sta. Quart. Bull. 2: 83-84.
- Paul, W. R. C. 1929. (2456)
A comparative morphological and physiological study of a number of strains of *Botrytis cinerea* Pers. with special reference to their virulence. Trans. Brit. Mycol. Soc. 14: 118-135.
- Peacock, R. W. 1911. (2457)
Rust in wheat and oats. Agr. Gaz. N. S. Wales 22: 1013-1016.
- Pearson, A. W. 1892. (2458)
Constitutional health of plants. Garden and Forest 5: 118, 130-131.
- Pée-Laby, E. 1926. (2459)
Coulure et maladies de la Vigne. Vie Agr. et Rurale 29: 188-189.
- Peirce, G. J. 1909. (2460)
The possible effect of cement dust on plants. Science 30: 652-654.
- _____. 1910. (2461)
An effect of cement dust on orange trees. Plant World 13: 283-288.
- Pellogot, E. 1876. (2462)
De l'action que l'acide borique et les borates exercent sur les végétaux. Compt. Rend. Acad. Sci. (Paris) 83: 686-688.
- Peltier, G. L. 1912. (2463)
A consideration of the physiology and life history of a parasitic *Botrytis* on pepper and lettuce. Mo. Bot. Gard. Rept. 23, 41-74.
- _____. 1916. (2464)
Parasitic *Rhizoctonias* in America. Ill. Agr. Exp. Sta. Bull. 189, 279-390.

- _____. 1916. (2465)
A serious disease of cultivated perennials caused by *Sclerotium rolfsii*. Ill. Agr. Exp Sta. Circ. 187, 1-3.
- _____. 1918. (2466)
Susceptibility and resistance to citrus-canker of the wild relatives, citrus fruits, and hybrids of the genus *Citrus*. Jour. Agr. Res. 14: 337-357.
- _____. 1919. (2467)
Carnation stem rot and its control. Ill. Agr. Exp. Sta. Bull. 223, 579-607.
- _____. 1920. (2468)
Influence of temperature and humidity on the growth of *Pseudomonas citri* and its host plants and on infection and development of the disease. Jour. Agr. Res. 20: 447-506.
- _____. 1922. (2469)
A study of the environmental conditions influencing the development of stem rust in the absence of an alternate host. I. Nebr. Agr. Exp. Sta. Res. Bull. 22, 1-15.
- _____. 1923. (2470)
A study of the environmental conditions influencing the development of stem rust in the absence of an alternate host. II. Nebr. Agr. Exp. Sta. Res. Bull. 25, 1-52.
- _____. 1925. (2471)
A study of the environmental conditions influencing the development of stem rust in the absence of an alternate host. III. Nebr. Agr. Exp. Sta. Res. Bull. 34, 1-12.
- _____. 1925. (2472)
A study of the environmental conditions influencing the development of stem rust in the absence of an alternate host. IV, V, VI. Nebr. Agr. Exp. Sta. Res. Bull. 35, 1-11.
- _____ and W. J. Frederick. 1922. (2473)
Weather and its relation to citrus scab epidemics in Alabama. Phytopath. 12: 57. (Abst.).
- _____ and _____. 1924. (2474)
Further studies on the relative susceptibility to citrus canker of different species and hybrids of the genus *Citrus*, including the wild relatives. Jour. Agr. Res. 28: 227-239.
- _____ and _____. 1924. (2475)
Relation of environmental factors to citrus scab caused by *Cladosporium citri* Massee. Jour. Agr. Res. 28: 241-254.
- _____ and _____. 1926. (2476)
Effects of weather on the world distribution and prevalence of citrus canker and citrus scab. Jour. Agr. Res. 32: 147-164.
- _____, C. J. King, and R. W. Samson. 1926. (2477)
Ozonium root rot. U. S. Dept. Agr., Dept. Bull. 1417, 1-25.
- Penman, F. 1929. (2478)
"Glassy end" of potatoes. Jour. Dept. Agr. Victoria 27: 449-459.
- Pennington, L. H. 1925. (2479)
Relation of weather conditions to the spread of white pine blister rust in the Pacific Northwest. Jour. Agr. Res. 30: 593-607.
- Perkins, A. J. 1916. (2480)
Salts injurious to vegetation and their relationship to the irrigation of arid and semi-arid regions. Jour. Dept. Agr. So. Aust. 19: 1021-1043.
- Perkins, W. R. and W. W. Welborne. 1928. (2481)
Effects of potash fertilizer on cotton wilt. Miss. Agr. Exp. Sta. Bull. 266, 15-16.
- Perry, G. S. 1920. (2482)
Some effects of frost in northern Pennsylvania. Forest Leaves 17: 107-108.
- Peters, B. G. 1926. (2483)
Heterodera schachtii (Schmidt) and soil acidity. Jour. Helminthology 4: 87-114.
- Petherbridge, F. R., W. R. Dillon, and L. F. Newman. 1926. (2484)
A peculiar leaf scorch and dying of fruit trees in the Wisbeck district during 1923. Jour. Roy. Hort. Soc., London, 51: 324-330.
- Pethybridge, G. H. 1918. (2485)
Investigations on potato diseases. Ninth Report. Jour. Ireland Dept. Agr. and Tech. Instr. 18: 2-8.
- _____. 1927. (2486)
Mycology and plant pathology. Trans. Brit. Mycol. Soc. 12: 91-105.
- Petit, P. 1893. (2487)
Influence du fer sur la végétation de l'orge. Compt. Rend. Acad. Sci. (Paris) 117: 1105-1107.

- Petri, L. 1910. (2488)
Beobachtungen über die schädliche Wirkung einiger toxischer Substanzen auf den
Oelbaum. *Centbl. Bakt.* 27: 153-159.
- _____. 1913. (2489)
Disseccamento dei rametti di *Pseudotsuga Douglasii* Carr. prodotta da una varietà di
Sphaeropsis Ellisia Sacc. *Ann. Mycol.* 11: 278-280.
- _____. 1913. (2490)
Contributo allo studie degli abbassamenti di temperatura sulle viti in rapporto all'arri-
ciamento. *Zeitschr. Pflanzenkr.* 23: 356-358. (Abst.).
- _____. 1913. (2491)
Studi sulla malattie dell'olivo: alcune ricerche sulla biologia del *Cyloconium oleagi-*
num Cast. Rome.
- _____. 1924. (2492)
La reazione del terreno ed alcune malattie di piante agrarie. *Nuovi Ann. Min. Agr.*
Italy 4: 248-251.
- _____. 1926. (2493)
Le malattie dell'olivo prodotte da cause inorganiche e da parassiti vegetali. *Intern.*
Olivicolt. Cong. 8: 1-17.
- _____. 1926. (2494)
Clorosi maculata internervale delle foglie degli Agrumi. *Boll. R. Staz. Pat. Veg.* 6:
380-384.
- _____. 1927. (2495)
Rassegna dei casi fitopatologici piu notevoli osservati nel 1926. *Boll. R. Staz. Pat. Veg.*
7: 1-45.
- _____. 1927. (2496)
Effect of manganese sulfate on lemon attacked by *Colletotrichum gloeosporioides*.
(Italian). *Boll. R. Staz. Pat. Veg.* 7: 213-214.
- _____. 1927. (2497)
Ricerche sulle cause del mal secco dei limoni in Provincia di Messina e sui mezzi per
combatterlo. *Boll. R. Staz. Pat. Veg.* 7: 229-284.
- _____. 1928. (2498)
Il "mal secco" dei Limoni in rapporto all'incoltura. *Boll. R. Staz. Pat. Veg.* 8:
216-221.
- _____. 1929. (2499)
Rassegna dei casi fitopatologici osservati nel 1928. *Boll. R. Staz. Pat. Veg.* 9: 1-65.
- _____. 1930. (2500)
La nutrizione minerale delle piante in rapporto alla predisposizione o alla resistenza di
queste a cause patogenae. *Boll. R. Staz. Pat. Veg.* 10: 121-152.
- _____. 1930. (2501)
Ulteriori ricerche sulla morfologia, biologia e parasitismo della "*Deuterophoma trachei-*
phila". *Boll. R. Staz. Pat. Veg.* 10: 191-221.
- Pettigrew, W. W. 1928. (2502)
The influence of air pollution on vegetation. *Gardeners' Chron.* 84: 292, 308-309, 335.
- Peturson, B. 1930. (2503)
Effect of temperature on host reactions to physiologic forms of *Puccinia coronata avenae*.
Sci. Agr. 11: 104-110.
- Pfeiffer, T. and E. Blanck. 1912. (2504)
Beiträge zur Frage über die Wirkung des Mangans auf das Pflanzenwachstum. *Landw.*
Vers. Sta. 77: 33-66.
- _____. and _____. 1914. (2506)
Beiträge zur Frage über die Wirkung des Mangans bezw. Aluminiums auf das Pflanzen-
wachstum. *Landw. Vers. Sta.* 83: 257-281.
- Phillips, F. C. 1882. (2507)
The absorption of metallic oxides by plants. *Jour. Franklin Inst.* 84 (114): 41-49.
- Phillips, F. J. 1907. (2508)
Effect of a late spring frost in the Southwest. *Forestry and Irrig.* 13: 484-492.
- _____. 1910. (2509)
Hail injury on forest trees. *Trans. St. Louis Acad. Sci.* 19: 49-56.
- Piemeisel, F. J. 1917. (2510)
Factors affecting the parasitism of *Ustilago zeae*. *Phytopath.* 7: 294-307.
- Pierce, N. B. 1892. (2511)
The California vine disease. *U. S. Dept. Agr., Div. of Veg. Phys. and Path. Bull.* 2,
1-222.

- _____. 1900. (2512)
Peach leaf curl: Its nature and treatment. U. S. Dept. Agr., Div. Veg. Phys. and Path.
Bull. 20, 1-204.
- Pieters, A. J. and J. Monteith. 1926. (2513)
Anthracnose as a cause of red clover failure in the southern part of the clover belt.
U. S. Dept. Agr., Farmers' Bull. 1510, 1-17.
- Pistor, R. 1930. (2514)
Beiträge zur Kenntnis der biologischen Tätigkeit von Pilzen in Waldböden. Centbl.
Bakt. 80: 169-200, 378-410.
- Pittman, H. A. 1930. (2515)
Some parasitic and non-parasitic causes of "empty" or "tipped" heads in wheat. Jour.
Dept. Agr. W. Aust. 7: 153-164.
- Plagge, H. H. 1925. (2516)
Soft-scald and breakdown of apples as affected by storage temperature. Proc. Amer.
Soc. Hort. Sci. 22: 58-66.
- _____. 1929. (2517)
Effect of storage temperature on soggy breakdown of Golden Delicious apples. Proc.
Amer. Soc. Hort. Sci. 25: 298-300.
- _____. 1930. (2518)
A study of soggy breakdown and some related functional diseases of the apple. Proc.
Amer. Soc. Hort. Sci. 26: 315-318.
- _____. and T. J. Maney. 1924. (2519)
Apple storage investigations. Iowa Agr. Exp. Sta. Bull. 222, 1-64.
- _____. and _____. 1925. (2520)
Cold storage investigations with Wealthy apples. Iowa Agr. Exp. Sta. Bull. 230, 57-72.
- _____. and _____. 1928. (2521)
Soggy breakdown of apples and its control by storage temperatures. Iowa Agr. Exp.
Sta. Res. Bull. 115, 61-116.
- Plakidas, A. G. 1927. (2522)
Strawberry xanthosis (yellows), a new insect-borne disease. Jour. Agr. Res. 35:
1057-1090.
- Plantz, P. 1929. (2523)
Vorbeugende Massnahmen gegen Krankheiten der Gewächshaustomaten! Obst- u.
Gemüsebau 75: 136-137.
- _____. 1930. (2524)
Winterbekämpfung des amerikanischen Stachelbeermeltaues. Gartenflora 79: 27.
- Plassmann, E. 1927. (2525)
Untersuchungen über den Lärchenkrebs. Neumann. 88 pp.
- Platz, G. A. 1928. (2526)
The relation of oxygen to the germination of the chlamydospores of *Ustilago zeae*
(Beckm.) Unger. Iowa State Col. Jour. Sci. 2: 137-144.
- _____. 1929. (2527)
Some factors influencing the pathogenicity of *Ustilago zeae* (Beckm.) Unger. Iowa
State Col. Jour. Sci. 3: 177-200.
- _____. L. W. Durrel, and M. F. Howe. 1927. (2528)
Effect of carbon dioxide upon the germination of chlamydospores of *Ustilago zeae*.
(Beckm.) Ung. Jour. Agr. Res. 34: 137-147.
- Plummer, F. G. 1912. (2529)
Lightning in relation to forest trees. U. S. Dept. Agr., Forest Serv. Bull. 111, 1-86.
- Plummer, J. K. and F. A. Wolf. 1920. (2530)
Injury to crops by borax. N. C. Dept. Agr. Bull. 41, 1-20.
- Plunkett, O. A. 1928. (2531)
The occurrence of *Peronospora sparsa* Berk. on hot-house roses in southern California.
Phytopath. 18: 950. (Abst.).
- Poenicke, W. 1928. (2532)
Weitere Beobachtungen über Kupferschäden. Prakt. Ratgeb. Obst- u. Gartenbau 43:
355-356.
- Poletika, W. von. 1928. (2533)
Agroklimatische Verhältnisse Russlands. Kulturtechniker 31: 507-519.
- Pool, R. J. 1913. (2534)
Some effects of drouth upon vegetation. Science 38: 822-825.
- Pool, V. W. and M. B. McKay. 1916. (2535)
Relation of stomatal movement to infection by *Cercospora beticola*. Jour. Agr. Res. 5:
1011-1038.

- _____ and _____. 1916. (2536)
 Climatic conditions as related to *Cercospora beticola*. Jour. Agr. Res. 6: 21-60.
- Poole, R. F. 1925. (2537)
 Sweet potato disease studies. N. J. Agr. Exp. Sta. Ann. Rept. 45, 392-399.
- _____. 1925. (2538)
 Tomato disease studies. N. J. Agr. Exp. Sta. Ann. Rept. 45, 400-403.
- _____. 1925. (2539)
 The relation of soil moisture to the pox disease of sweet potatoes. Phytopath. 15: 48. (Abst.).
- _____. 1925. (2540)
 The relation of soil moisture to the pox or ground rot disease of sweet potatoes. Phytopath. 15: 287-293.
- _____. 1925. (2541)
 Fertilizer injuries to sweet potatoes. N. J. Agr. 7 (9): 7-8.
- _____. 1930. (2542)
 A chemical control of sweet potato scurf. N. C. Agr. Exp. Sta. Tech. Bull. 38, 1-52.
- Porter, C. L. 1927. (2543)
 Survey of the vegetation in the vicinity of cement mills. Proc. Ind. Acad. Sci. 36: 263-267.
- _____. 1928. (2544)
 Ecological relationships of fungi in culture. Proc. Ind. Acad. Sci. 37: 391-393.
- Porter, D. R. 1928. (2545)
 Infection studies with watermelon wilt caused by *Fusarium niveum* E. F. S. Iowa Agr. Exp. Sta. Res. Bull. 112, 345-368.
- _____. 1928. (2546)
 Studies with the watermelon wilt, caused by *Fusarium niveum* E. F. S. Phytopath. 18: 143-144. (Abst.).
- _____. 1930. (2547)
 Pathogenicity of *Fusarium niveum* and the resistance of some watermelon hybrids. Phytopath. 20: 116. (Abst.).
- _____. and I. E. Melhus. 1929. (2548)
 Further studies on watermelon wilt in Iowa. Phytopath. 19: 84. (Abst.).
- Potenza, G. 1928. (2549)
 Osservazioni su la recettività dei cereali per la ruggine. Staz. Sperim., Bari Publ. 12: 1-72.
- Potter, A. A. 1914. (2550)
 Head smut of sorghum and maize. Jour. Agr. Res. 2: 339-371.
- _____. and L. E. Melchers. 1917. (2551)
 Ecological observations on *Ustilago zeae*. Phytopath. 7: 73-74. (Abst.).
- _____. and _____. 1925. (2552)
 Study of the life history and ecologic relations of the smut of maize. Jour. Agr. Res. 30: 161-173.
- Potter, G. F. 1923. (2553)
 Winter injury of apple roots. N. H. Agr. Exp. Sta. Bull. 208, 6-7.
- _____. 1924. (2554)
 Experiments on resistance of apple roots to low temperatures. N. H. Agr. Exp. Sta. Tech. Bull. 27, 1-34.
- Potter, M. C. 1912. (2555)
 Bacterial diseases of plants. Jour. Agr. Sci. 4: 323-337.
- _____. 1923. (2556)
 Wart disease of the potato. Preliminary experiments. Trans. Brit. Mycol. Soc. 8: 247-249.
- Powell, G. H. 1898. (2557)
 Pea canning in Delaware. Del. Agr. Exp. Sta. Bull. 41, 1-16.
- _____. 1899. (2558)
 Some climatic and fungus diseases of the chestnut. Amer. Gard. 20: 559.
- _____. and S. H. Fulton. 1903. (2559)
 The apple in cold storage. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 48, 1-64.
- Powers, W. L. 1927. (2560)
 The effect of hydrogen-ion concentration on the growth of certain plants. Soil Sci. 24: 1-7.
- Pratolongo, U. 1925. (2561)
 La clorosi alcalina della vite. Atti R. Accad. Naz. Lincei, Rend. Cl. Sci. Fis. Mat. e Nat. 1: 319-322.

- Pratt, O. A. 1916. (2562)
A western field rot of the Irish potato tuber caused by *Fusarium radicleicola*. Jour. Agr. Res. 6: 297-309.
- _____. 1916. (2563)
Control of powdery dry rot of western potatoes caused by *Fusarium trichothecioides*. Jour. Agr. Res. 6: 817-832.
- Preti, G. 1926. (2564)
Studio intorno al cancro del Melo ed allo *Sphaeropsis malorum*. Ann. R. Ist. Scaola. Super. Agr., Portici, 1: 25-41.
- Prevost, E. W. 1888. (2565)
Beiträge zur Kenntnis der Beschädigung der Pflanzen und Bäume durch Hüttenrauch. Landw. Vers. Sta. 35: 25-28.
- Prévost, I. E. 1807. (2566)
Mémoire sur la cause immédiate de la carie au charbon des blés et plusieurs autres maladies des plantes. Paris. 80 pp.
- Priestley, J. H. 1922. (2567)
The toxic action of traces of coal gas upon plants. Ann. Appl. Biol. 9: 146-155.
- _____. 1924. (2568)
Tar, smoke, and coal gas as factors inimical to vegetation. Sci. Prog. 18: 587-596.
- Priode, C. N. 1928. (2569)
Further studies in the ring-spot disease of tobacco. Amer. Jour. Bot. 15: 88-93.
- Pritchard, F. J. 1911. (2570)
A preliminary report on the yearly origin and dissemination of *Puccinia graminis*. Bot. Gaz. 52: 169-192.
- _____. and W. S. Porte. 1921. (2571)
Collar-rot of tomato. Jour. Agr. Res. 21: 179-184.
- _____. and _____. 1921. (2572)
Effect of fertilizers and lime on the control of tomato leafspot (*Septoria lycopersici*). Phytopath. 11: 433-440.
- _____. and _____. 1922. (2573)
Isaria rot of tomato fruits. Phytopath. 12: 167-172.
- _____. and _____. 1923. (2574)
Watery-rot of tomato fruits. Jour. Agr. Res. 24: 895-905.
- _____. and _____. 1924. (2575)
The control of tomato leaf-spot. U. S. Dept. Agr., Dept. Bull. 1288, 1 18.
- _____. and _____. 1924. (2576)
The relation of temperature and humidity to tomato leafspot (*Septoria lycopersici* Speg.). Phytopath. 14: 156-169.
- Prunet, A. 1902. (2577)
Développement du black-rot. Jour. Agr. Prat. 3: 674-676.
- _____. 1924. (2578)
Effets de la sécheresse et action des engrais minéraux sur diverses variétés de pommes de terre. Jour. Agr. Sud-Ouest 3: 94-106.
- Pulst, C. 1902. (2579)
Die Widerstandsfähigkeit einiger Schimmelpilze gegen Metallgifte. Jahrb. Wiss. Bot. 37: 205-263.
- Quaintance, A. L. 1900. (2580)
The brown rot of peaches, plums and other fruits. Ga. Agr. Exp. Sta. Bull. 50, 237-269.
- Quanjor, H. M. 1928. (2581)
De invloed van kaligebrek op de vatbaarheid van Bloemkool voor *Peronospora parasitica*. Tijdschr. Plantenziek. 34: 254-256.
- _____. 1929. (2582)
Einfluss der Düngung auf die Gesundheit der Kartoffel I. Ernähr. Pflanze 25: 194-198.
- _____. and J. Hudig. 1923. (2583)
De Aardoppelschurft met betrekking tot klimaat en bodem. Cultura 35: 1-12.
- _____. T. H. Thung, and D. L. Elze. 1930. (2584)
"Pseudonectrosis" of the potato. Phytopath. 20: 137. (Abst.).
- Quinn, D. G. 1924. (2585)
Downy mildew. Jour. Dept. Agr. So. Aust. 27: 540-550.
- _____. 1928. (2586)
"Dieback" of apple trees. Fruit World of Australasia 29: 222.
- Rabien, H. 1927. (2587)
Ueber Keimungs- und Infektionsbedingungen von *Tilletia tritici*. Arb. Biol. Reichsanst. Land- u. Forstw. 15: 297-353.

- Radspinner, W. A. 1923. (2588)
Effects of certain physiological factors on blossom drop and yield of tomatoes. Proc. Amer. Soc. Hort. Sci. 19: 71-82.
- Raines, M. A. 1922. (2589)
Vegetative vigor of the host as a factor influencing susceptibility and resistance to certain rust diseases of the higher plants. Amer. Jour. Bot. 9: 183-203, 215-238.
- Raleigh, W. P. 1930. (2590)
Infection studies of *Diplodia zeae* (Schw.) Lev. and control of seedling blights of corn. Iowa Agr. Exp. Sta. Res. Bull. 124, 93-121.
- Ramakrishnan, T. S. 1930. (2590a)
A wilt of zinnia caused by *Sclerotium rolfsii*. Madras Agr. Jour., Oct.
- Rambousek, F. and F. Neuwirth. 1930. (2591)
Gewebssrisse im parenchymatischen Grundgewebe und die nachfolgende Fäulnis der Zuckerrübe. Zeitschr. f. Zuckerind. 15: 53-60.
- Ramos, J. C. 1926. (2592)
Pythium damping-off of seedlings. Philippine Agr. 15: 85-97.
- Ramsbottom, J. 1914-1915. (2593)
Iris leaf-blotch disease (*Heterosporium gracile* Sacc.). Jour. Roy. Hort. Soc., London, 40: 481-492.
- Ramsey, G. B. 1918. (2594)
Influence of moisture and temperature upon infection by *Spongospora subterranea*. Phytopath. 8: 29-31.
- _____. 1922. (2595)
Basisporium gallarum Moll., a parasite of the tomato. Bot. Gaz. 74: 325-328.
- _____. 1925. (2596)
Sclerotinia species causing decay of vegetables under transit and market conditions. Jour. Agr. Res. 31: 597-632.
- Ramsey, H. J. 1904. (2597)
Some observations on the Botrytis rot and drop of lettuce. Wis. Agr. Exp. Sta. Ann. Rept. 21, 279-288.
- Rand, F. V. 1914. (2598)
Some diseases of pecans. Jour. Agr. Res. 1: 303-338.
- _____. 1917. (2599)
Leafspot-rot of pond lilies caused by *Helicosporium nymphaearum*. Jour. Agr. Res. 8: 219-232.
- _____. 1922. (2600)
Pecan rosette: Its histology, cytology, and relation to other chlorotic diseases. U. S. Dept. Agr., Dept. Bull. 1038, 1-42.
- _____. and L. C. Cash. 1921. (2601)
Stewart's disease of corn. Jour. Agr. Res. 21: 263-264.
- Rands, R. D. 1917. (2602)
Early blight of potato and related plants. Wis. Agr. Exp. Sta. Res. Bull. 42, 1-48.
- Rane, F. W. 1917. (2603)
Recent troubles with our forest trees. Trans. Mass. Hort. Soc., 57-69.
- Rankin, W. H. 1918. (2604)
Manual of tree diseases. New York.
- Rapin, J. 1927. (2605)
Action de la température et du sol sur le développement du *Tilletia tritici* (Carie du Blé). Ann. Agr. Suisse 28: 79-84.
- Rapp, C. W. 1920. (2606)
Bacterial blight of beans. Okla. Agr. Exp. Sta. Bull. 131, 1-39.
- Rappard. 1895. (2607)
Hirzfäule der Rüben und Kalkdüngung. Zeitschr. Pflanzenkr. 5: 250.
- Rast, L. E. 1922. (2608)
Control of cotton wilt by the use of potash fertilizers. Jour. Amer. Soc. Agron. 14: 222-224.
- Ráthay, E. 1891. (2609)
Einwirkung des Blitzes auf die Weinrebe. Sitzbr. K. Akad. Wiss. Wein 16 (9): 96.
- Rathschlag, H. 1930. (2610)
Studien über *Helminthosporium avenae*. Phytopath. Zeitschr. 2: 469-492.
- Raulin, J. 1869. (2611)
Études chimiques sur la végétation. Ann. Sci. Nat. Bot., Ser. 5, 11: 93-299.
- Ravaz, L. 1907. (2612)
Le black-rot. Prog. Agr. et Vitic. 47: 747-749.

- _____. 1917. (2613)
Chronique—Ce qu'il faut connaître du Mildiou. Règles à suivre pour le combattre. Prog. Agr. et Vitic. 38: 269-277.
- _____. 1917. (2614)
Le mildiou. Prog. Agr. et Vitic. 38: 557-558.
- _____. 1924. (2615)
Chronique: Traitement de la chlorose. Prog. Agr. et Vitic. 42: 365-366.
- _____. 1924. (2616)
Chronique: Pour éviter la coulure. Prog. Agr. et Vitic. 81: 509-511.
- _____. 1925. (2617)
Chronique: Le temps.—Le Mildiou. Prog. Agr. et Vitic. 83: 581-586.
- _____. 1927. (2618)
La grillure des feuilles. Ann. École Nat. Agr., Montpellier, 19: 5-12.
- _____. 1927. (2619)
Les dépérissements de la vigne en Algérie. Prog. Agr. et Vitic. 87: 7-11.
- _____. 1927. (2620)
Chronique: Le temps.—Orages.—Grêle.—Rot blanc. Prog. Agr. et Vitic. 48: 197-198.
- _____. 1928. (2621)
Recherches sur le court-noué. Prog. Agr. et Vitic. 90: 5-11, 53-63.
- _____. 1928. (2622)
Sur les conditions d'apparition du court-noué. Prog. Agr. et Vitic. 90: 320-322.
- _____. 1928. (2623)
Brûlures par les bouillies. Prog. Agr. et Vitic. 45: 545.
- _____. 1929. (2624)
Chronique: Les brûlures des bouillies. Prog. Agr. et Vitic. 92: 55-57.
- _____. and A. Bonnet. 1901. (2625)
Les effets de la foudre et la gélivure. Compt. Rend. Acad. Sci. (Paris) 132: 805-807.
- _____. H. Lagatu, and Maume. 1928. (2626)
Un cas spécial de chlorose des Vignes américaines greffées. Ann. École Nat. d'Agr., Montpellier, 19: 159-179.
- _____. and G. Verge. 1912. (2627)
Conditions de développement du mildiou de la vigne. Prog. Agr. et Vitic. 55: 296-300, 485-488.
- _____. and _____. 1913. (2628)
Influence de la température sur la germination des conidies du mildiou. Prog. Agr. et Vitic. 57: 170-177.
- Ravn, F. K. 1900. (2629)
Nogle Helminthosporium—Arter og de af dem fremkaldte Sygdomme hos Byg og Havre. Bot. Tidsskr. 23: 101-321.
- Raybaud, L. 1908. (2630)
De l'influence de la lumière sur la végétation de *Rhizopus nigricans*. Compt. Rend. Soc. Biol. (Paris) 64: 1172-1174.
- Read, F. M. 1930. (2631)
"Soil alkali" investigations at Tresco. Jour. Dept. Agr. Victoria 28: 65-90.
- Reckendorfer, P. 1930. (2632)
Das Flor und seine Beziehung zur Pflanze. Fortschr. Landw. 5: 481-484.
- Reddick, D. 1910. (2633)
The weather and the plant pathologist. U. S. Dept. Agr., Mo. Weather Rev. 38: 4.
- _____. 1911. (2634)
The black rot disease of grapes. N. Y. (Cornell) Agr. Exp. Sta. Bull. 293, 285-362.
- _____. 1912. (2635)
Frost injury. Proc. N. Y. State Fruit Growers' Assoc. 11: 34-41.
- _____. 1914. (2636)
Decay of celery in storage. Phytopath. 4: 45. (Abst.).
- _____. 1917. (2637)
Effect of soil temperature on the growth of bean plants and on their susceptibility to a root parasite. Amer. Jour. Bot. 4: 513-519.
- _____. 1918. (2638)
Lightning injury to grape vines. Phytopath. 8: 298.
- Reddy, C. S. and W. E. Brentzel. 1922. (2639)
Investigations of heat canker of flax. U. S. Dept. Agr., Dept. Bull. 1120, 1-18.
- _____. and J. Godkin. 1923. (2640)
A bacterial disease of brome-grass. Phytopath. 13: 75-85.

- Reed, G. M. 1906. (2641)
Infection experiments with *Erysiphe graminis*. Trans. Wis. Acad. Sci. 15: 135-162.
- _____. 1910. (2642)
The influence of environmental conditions upon the development of plant diseases. Mo. State Bd. Hort. Bull. 31, 1-14.
- _____. 1912. (2643)
Infection experiments with the powdery mildew of wheat. Phytopath. 2: 81-87.
- _____. 1914. (2644)
An unusual outbreak of apple blossom blight. Phytopath. 4: 27-30.
- _____. 1914. (2645)
Influence of light on infection of certain hosts by powdery mildew. Science 39: 294-295. (Abst.).
- _____. 1915. (2646)
Physiological relations of powdery mildews to their hosts. Mo. Agr. Exp. Sta. Bull. 131, 469-470.
- _____. 1916. (2647)
The powdery mildews of *Avena* and *Triticum*. Mo. Agr. Exp. Sta. Res. Bull. 23, 1-19.
- _____. 1928. (2648)
Plant pathology. Brooklyn Bot. Gard. Rec. 17: 43-49.
- _____. 1928. (2649)
Physiologic races of bunt of wheat. Amer. Jour. Bot. 15: 157-170.
- _____. and J. A. Faris. 1924. (2650)
Disease resistance. Brooklyn Bot. Gard. Rec. 13: 28-31.
- _____. and _____. 1924. (2651)
Influence of environal factors on the infection of sorghums and oats by smuts. I. Experiments with covered and loose kernel smuts of sorghum. Amer. Jour. Bot. 11: 518-534.
- _____. and _____. 1924. (2652)
Influence of environal factors on the infection of sorghums and oats by smuts. II. Experiments with covered smut of oats and general considerations. Amer. Jour. Bot. 11: 579-599.
- _____. and L. E. Melchers. 1925. (2653)
Sorghum smuts and varietal resistance in sorghums. U. S. Dept. Agr., Dept. Bull. 1284, 1-56.
- Reed, H. S. 1912. (2654)
Does *Phytophthora infestans* cause tomato blight? Phytopath. 2: 250-252.
- _____. and E. T. Bartholomew. 1930. (2655)
The effects of desiccating winds on citrus trees. Calif. Agr. Exp. Sta. Bull. 484, 1-59.
- _____. and J. S. Cooley. 1911. (2656)
Heterosporium variabile Cke., its relation to *Spinacia oleracea* and environmental factors. Va. Agr. Exp. Sta. Ann. Rept., 1909-1910, 78-99.
- _____. and _____. 1911. (2657)
Plant diseases in Virginia in the years 1909 and 1910. Va. Agr. Exp. Sta. Ann. Rept., 1909-1910, 99-119.
- _____. and J. T. Rogers. 1912. (2658)
Foliage diseases of the apple. Va. Agr. Exp. Sta. Bull. 195, 1-22.
- _____. and _____. 1912. (2659)
Heterosporium variabile Cke., its relation to *Spinacia oleracea* and environmental factors. Centbl. Bakt. 32: 40-58.
- _____. and C. H. Crabill. 1914. (2660)
Experiments on the control of the cedar rust of apples. Va. Agr. Exp. Sta. Bull. 203, 1-28.
- _____. and C. H. Crabill. 1913. (2661)
Plant diseases in Virginia in the years 1911 and 1912. Va. Agr. Exp. Sta. Ann. Rept., 1911-1912, 35-50.
- _____. and _____. 1915. (2662)
Notes on plant diseases in Virginia observed in 1913 and 1914. Va. Agr. Exp. Sta. Tech. Bull. 2, 37-58.
- _____. and _____. 1915. (2663)
The cedar rust disease of apples caused by *Gymnosporangium juniperi-virginianae* Schw. Va. Agr. Exp. Sta. Tech. Bull. 9, 1-106.
- _____. and A. R. C. Haas. 1923. (2664)
Studies on the effects of sodium, potassium, and calcium on young orange trees. Calif. Agr. Exp. Sta. Tech. Paper 11, 1-23.

-
- _____ and _____. 1924. (2665)
Nutrient and toxic effects of certain ions on citrus and walnut trees with especial reference to concentration on pH of the medium. Calif. Agr. Exp. Sta. Tech. Paper 17, 1-75.
- Reed, W. G. and C. L. Feldkamp. 1915. (2666)
Selected bibliography of frost in the United States. U. S. Dept. Agr., Mo. Weather Rev. 43: 512-516.
- Rees, H. L. 1915. (2667)
Control of damping-off fungi. Wash. Agr. Exp. Sta. Mo. Bull. 3 (1), 15-16.
- Reichert, I. 1927. (2668)
Downy mildew (*Plasmopara viticola*) of the vine in Palestine. Proc. Zionist Agr. Exp. Sta. 7-8: 349-351.
-
- _____ and E. Hellinger. 1930. (2669)
Internal decline—a physiological disease of citrus fruits new to Palestine. Hadar 3: 14 pp. (Reprint).
- Rein, R. 1908. (2670)
Untersuchungen über den Kältetod der Pflanzen. Zeitschr. Naturw. 80: 1-38.
- Reinicke, R. 1930. (2671)
Die Kalkempfindlichkeit der gelben Lupine und der Anteil der Knöllchenbakterien an der Erkrankung. Zeitschr. Pflanzenernährung, Düng. u. Bodenkunde 17: 79-102.
- Reinking, O. A. 1923. (2672)
Comparative study of *Phytophthora faberi* on coconut and cacao in the Philippine Islands. Jour. Agr. Res. 25: 267-284.
- Remer, W. 1904. (2673)
Der Rost des Getreides in Schlesien im Sommer 1903. Zeitschr. Pflanzenkr. 14: 65-70.
- Remy, T. and F. v. Meer. 1929. (2674)
Über das Wesen der Gelbrostschtzwirkung von Kalisalz düngungen. Ernähr. Pflanze 25: 73-77.
- Reuther. 1913. (2675)
Die Fusskrankheit des Weizens. Deutsche. Landw. Presse 40: 780.
- Revell, P. O. 1865. (2676)
Recherches de physiologie végétale de l'action des poisons sur les plantes. Paris.
- Reyes, G. M. 1929. (2677)
A preliminary report on the stem-rot of rice. Philippine Agr. Rev. 22: 313-331.
- Reynolds, E. S. 1912. (2678)
Relations of parasitic fungi to their host plants. Bot. Gaz. 53: 365-395.
-
- _____. 1918. (2679)
Two tomato diseases. Phytopath. 8: 535-542.
- Rhoades, A. S. 1923. (2680)
The formation and pathological anatomy of frost rings in conifers injured by late frosts. U. S. Dept. Agr., Dept. Bull. 1131, 1-14.
-
- _____. 1923. (2681)
Notes on the failure of grapevines to set fruit and on shelling. Phytopath. 13: 513-519.
-
- _____. 1925. (2682)
Observations on citrus wilt. Proc. Fla. State Hort. Soc. 38: 26-39.
-
- _____. 1926. (2683)
Diseases of grapes in Florida. Fla. Agr. Exp. Sta. Bull. 178, 75-156.
-
- _____. 1927. (2684)
Citrus blight or wilt, water injury, and related troubles. Fla. Agr. Exp. Sta. Ann. Rept., 68-70.
- Rhode, A. 1895. (2685)
Schädigung von Roggenfeldern, durch die einer Superphosphat-Fabrik entströmenden Gase. Zeitschr. Pflanzenkr. 5: 135-136.
- Rice, M. A. 1927. (2686)
The haustoria of certain rusts and the relation between the host and pathogene. Bull Torrey Bot. Club 54: 63-154.
- Richards, B. L. 1920. (2687)
Influence of soil temperature on potato diseases. Wis. Agr. Exp. Sta. Bull. 319, 32.
-
- _____. 1921. (2688)
The pathogenicity of *Corticium vagum* as affected by soil temperature. Phytopath. 11: 56. (Abst.).
-
- _____. 1921. (2689)
Pathogenicity of *Corticium vagum* on the potato as affected by soil temperature. Jour Agr. Res. 21: 459-482.

- _____. 1922. (2690)
Relation of rainfall to the late blight or Phoma rot of the sugar beet. *Phytopath.* 12: 443. (Abst.).
- _____. 1923. (2691)
Further studies on the pathogenicity of *Corticium vagum* on the potato as affected by soil temperature. *Jour. Agr. Res.* 23: 761-770.
- _____. 1923. (2692)
Soil temperature as a factor affecting the pathogenicity of *Corticium vagum* on the pea and the bean. *Jour. Agr. Res.* 25: 431-449.
- _____. 1928. (2693)
Irrigation as a cause of white spot of alfalfa. *Phytopath.* 18: 136-137. (Abst.).
- _____. 1929. (2694)
White-spot of alfalfa and its relation to irrigation. *Phytopath.* 19: 125-141.
- Richards, H. M. and D. T. MacDougal. 1904. (2695)
The influence of carbon monoxide and other gases upon plants. *Bull. Torrey Bot. Club* 31: 57-66.
- Richardson, J. K. 1923. (2696)
A study of the soft rot of Iris. *Quebec Soc. Prot. Plants Ann. Rept.* 15, 105-120.
- Richter, W. 1895. (2697)
Ueber die Beziehungen des Scheideschlamms zum Auftreten der Herzfäule der Rüben. *Zeitschr. Pflanzenkr.* 5: 51-54.
- Riede, W. 1923. (2698)
Ein einwandfreier Rauchschadennachweis. *Mitt. Deut. Landw. Ges.* 38: 423-424.
- Riehm, E. 1917. (2699)
Nichtparasitäre Haferkrankheiten Dörrfleckenkrankheit, Perchloratvergiftung. *Deutsche Landw. Presse* 44: 62.
- _____. 1923. (2700)
Zur chemotherapie der Pflanzenkrankheiten. *Zeitschr. Angew. Chem.* 36: 3-4.
- _____. 1929. (2701)
Erprobte Beizmittel und Beizverfahren. *Mitt. Deut. Landw. Ges.* 64: 748-749.
- Rigg, A. 1906. (2702)
On the destructive effect of smoke in relation to plant life. *Jour. Roy. Sanitary Inst.* 27: 160.
- Rigg, T. and L. Tiller. 1927. (2703)
A report of certain diseases of the apple in the Nelson district, N. Z., 1925-26. *Jour. Pomol. and Hort. Sci.* 6: 113-127.
- Rijks, A. B. 1916. (2704)
Banana diseases on the Salayer Islands. *Dept. Landb. Nijv. an Hendel (D. E. Indies) Lab. Plantenziekten Meded.* No: 21, 1-16.
- Riker, A. J. 1924. (2705)
Relations of temperature and moisture to the development of crown gall. *Phytopath.* 14: 30. (Abst.).
- _____. 1925. (2706)
The influence of temperature and of previous infection on the development of crown gall. *Phytopath.* 15: 45. (Abst.).
- _____. 1926. (2707)
Studies on the influence of some environmental factors on the development of crown gall. *Jour. Agr. Res.* 32: 83-96.
- _____. 1929. (2708)
Environment influences infection by bacterial plant parasites. *Wis. Agr. Exp. Sta. Ann. Rept., Bull.* 405, 73.
- _____. 1929. (2709)
Studies on the influence of environment on infection by certain bacterial plant parasites. *Phytopath.* 19: 96. (Abst.).
- _____. et al. 1930. (2710)
Studies on infectious hairy root of nursery apple trees. *Jour. Agr. Res.* 41: 507-540.
- Riols, P. 1926. (2711)
Note sur le mildiou du Houblon. *Rev. Path. Veg. et Ent. Agr.* 13: 26-30.
- Rippel, A. 1921. (2712)
Entwicklungs- und Ernährungszustand der Pflanzen in ihren Beziehungen zum Auftreten von parasitären Pflanzenkrankheiten. *Fuhling's Landw. Zeit.* 70: 428-435.
- _____. 1923. (2713)
Über die durch Mangan verursachte Eisenchlorose bei grünen Pflanzen. *Biochem. Zeitschr.* 140: 315-323.

- and O. Ludwig. 1927. (2714)
Über den Einfluss des Ernährungszustandes der Gerste auf den Befall durch *Pleospora trichostoma* Wint. (Streifenkrankheit). *Angew. Bot.* 9: 541-560.
- Ritthausen, H. and R. Pott. 1873. (2715)
Untersuchungen über den Einfluss einer an Stickstoff und Phosphorsäure reichen Düngung auf die Zusammensetzung der Pflanze und der Samen von Sommerweizen. *Landw. Vers. Sta.* 16: 384-399.
- Ritzema-Bos, J. 1892. (2716)
Ergrünungsmangel infolge zu niederer Frühlings—temperatur. *Zeitschr. Pflanzenkr.* 2: 136-142.
- Rivera, V. 1913. (2717)
Primo contributo alle studio della recettività della quercia per l'oidio. *Atti. R. Accad. Lincei, Rend. Cl. Sci. Fis. Mat. e Nat., Ser. 22*, 5: 168-173.
- , 1915. (2718)
Ricerche sperimentali sulle cause predisponenti il frumento alla "nebbia". *Zeitschr. Pflanzenkr.* 25: 370-371. (Abst.).
- , 1924. (2719)
Cryptogamic epidemics and the environmental factors that determine them. *Intern. Rev. Sci. and Pract. Agr., Rome*, 2: 604-609.
- Rives, L. 1924. (2720)
Le court-noué. *Prog. Agr. et Vitic.* 81: 424-426, 447-452.
- , 1928. (2721)
Sur un cas de fatigue du sol. La maladie des céréales semées sur défrichement du sol. *Jour. Agr. Prat.* 92: 491-494.
- Riviere, G. et al. 1927. (2722)
La chlorose des arbres fruitiers. *Pomol. Française*, 118-124.
- and G. Bailhache. 1910. (2723)
De la chlorose des arbres fruitiers. *Prog. Agr. et Vitic.* 53: 453-454.
- Robbins, W. J. 1926. (2724)
Botany. *Mo. Agr. Exp. Sta. Bull.* 236, 44-45.
- Roberts, H. F. 1919. (2725)
Yellow-berry in hard winter wheat. *Jour. Agr. Res.* 18: 155-169.
- and G. F. Freeman. 1908. (2726)
The yellow-berry problem in Kansas hard winter wheats. *Kan. Agr. Exp. Sta. Bull.* 156, 1-85.
- Roberts, J. W. 1917. (2728)
Control of peach bacterial spot in Southern orchards. *U. S. Dept. Agr., Dept. Bull.* 543, 1-7.
- , 1921. (2729)
Apple blotch and bitter rot and their control. *Proc. Tenn. State Hort. Soc.* 16: 38-45.
- and J. C. Dunegan. 1927. (2730)
Peach brown rot and scab. *U. S. Dept. Agr., Farmers' Bull.* 1527, 1-14.
- and L. Pierce. 1918. (2731)
Apple bitter-rot and its control. *U. S. Dept. Agr., Farmers' Bull.* 938, 1-14.
- and —, 1926. (2732)
Apple scab. *U. S. Dept. Agr., Farmers' Bull.* 1478, 1-12.
- and —, 1929. (2733)
A promising spray for the control of peach bacterial spot. *Phytopath.* 19: 106-107. (Abst.).
- Roberts, R. H. 1917. (2734)
Winter injury to cherry blossom buds. *Proc. Amer. Soc. Hort. Sci.* 14: 105-110.
- , 1919. (2735)
"Crinkle" on northwestern greening. *Phytopath.* 9: 261-263.
- , 1922. (2736)
The development and winter injury of cherry blossom buds. *Wis. Agr. Exp. Sta. Res. Bull.* 52, 1-24.
- Robinson, G. H. 1907. (2737)
Take-all and its control. *Jour. Dept. Agr. Victoria* 5: 253-256.
- Robinson, W. 1914. (2738)
Some experiments on the effect of external stimuli on the sporidia of *Puccinia malvacearum* (Mont.). *Ann. Bot.* 28: 331-340.
- Rodenhiser, H. A. 1928. (2739)
Physiologic specialization in some cereal smuts. *Phytopath.* 18: 955-1003.

- _____. 1930. (2740)
Physiologic specialization and mutation in *Phylactaena linicola* Speg. *Phytopath.* 20: 931-942.
- Rogers, W. E. 1922. (2741)
Ice storms and trees. *Torreyia* 22: 61-63.
- Rolfs, F. M. 1904. (2742)
Potato failures. *Colo. Agr. Exp. Sta. Bull.* 91, 1-33.
- _____. 1910. (2743)
Winter killing of twigs, cankers and sun scald of peach trees. *Mo. State Fruit Exp. Sta. Bull.* 17, 1-101.
- _____. 1915. (2744)
Angular leaf spot of cotton. *S. C. Agr. Exp. Sta. Bull.* 184, 1-30.
- _____. 1915. (2745)
A bacterial disease of stone fruits. *N. Y. (Cornell) Agr. Exp. Sta. Mem.* 8, 381-436.
- _____. 1920. (2746)
Blossom drop of tomatoes. *Okla. Agr. Exp. Sta. Ann. Rept.* 29, 47-49.
- Rolfs, P. H. 1896. (2747)
Celery blight. *Fla. Agr. Exp. Sta. Ann. Rept.*, 35-37.
- _____. 1898. (2748)
Diseases of the tomato. *Fla. Agr. Exp. Sta. Bull.* 47, 117-153.
- _____. 1904. (2749)
Wither-tip and other diseases of citrus trees and fruits caused by *Colletotrichum gloeosporioides*. *U. S. Dept. Agr., Bur. Pl. Indus. Bull.* 52, 1-20.
- _____, H. S. Fawcett, and B. F. Floyd. 1911. (2750)
Diseases of citrus fruits. *Fla. Agr. Exp. Sta. Bull.* 108, 27-47.
- Rommel, L. G. 1922. (2751)
Luftväxlingen i marken som ekologisk faktor. *Meddel. Statens Skogsförsöksanst.* 19: 125-359.
- _____. 1923. (2752)
Soil aeration. *Intern. Rev. Sci. and Pract. Agr., Rome*, 1: 281-297.
- Roodenburg, J. W. M. 1927. (2753)
Zuurstofgebrek in den Grond in Verband met Wortelrot. Thesis, Univ. Utrecht. 103 pp.
- Rosa, J. T. 1921. (2754)
Investigations on the hardening process in vegetable plants. *Mo. Agr. Exp. Sta. Res. Bull.* 48, 1-90.
- Rose, D. H. 1917. (2755)
Blister spot of apples and its relation to a disease of apple bark. *Phytopath.* 7: 198-208.
- _____. 1924. (2756)
Diseases of stone fruits on the market. *U. S. Dept. Agr., Farmers' Bull.* 1435, 1-16.
- _____. 1924. (2757)
Leather rot of strawberries. *Jour. Agr. Res.* 28: 357-375.
- _____. 1925. (2758)
Internal breakdown of apples. *Proc. Idaho Hort. Assoc.* 25: 109-110.
- _____. 1926. (2759)
Relation of strawberry fruit rots to weather conditions in the field. *Phytopath.* 16: 229-232.
- _____ and L. F. Butler. 1927. (2760)
Relation of storage temperature to lag in growth of fungus cultures. *Phytopath.* 17: 55. (Abst.).
- Rosen, H. R. 1922. (2761)
A bacterial disease of foxtail (*Chaetochloa lutescens*). *Ann. Mo. Bot. Gard.* 9: 333-388.
- _____. 1926. (2762)
Bacterial stalk rot of corn. *Ark. Agr. Exp. Sta. Bull.* 209, 1-28.
- _____. 1926. (2763)
Bacterial stalk rot of corn. *Phytopath.* 16: 241-266.
- _____. 1927. (2764)
The control of cotton wilt by the use of organic fertilizers. *Science* 65: 616-617.
- _____. 1928. (2765)
A consideration of the pathogenicity of the cotton-wilt fungus, *Fusarium vasinfectum*. *Phytopath.* 18: 419-438.
- _____ and J. A. Elliott. 1923. (2766)
Pathogenicity of *Ophiobolus cariceti* in its relationship to weakened plants. *Jour. Agr. Res.* 25: 351-358.

- _____ and L. Shaw. 1929. (2767)
Studies on *Sclerotium rolfsii*, with special reference to the metabolic interchange between soil inhabitants. Jour. Agr. Res. 39: 41-61.
- Rosenbaum, J. 1920. (2768)
Infection experiments on tomatoes with *Phytophthora terrestris* Sherb. and a hot water treatment of the fruit. Phytopath. 10: 101-105.
- _____ and G. B. Ramsey. 1918. (2769)
Influence of temperature and precipitation on the blackleg of potato. Jour. Agr. Res. 13: 507-513.
- _____ and C. E. Sando. 1920. (2770)
Correlation between size of the fruit and the resistance of the tomato skin to puncture and its relation to infection with *Macrosporium tomato* Cooke. Amer. Jour. Bot. 7: 78-82.
- Ross, H. 1924. (2771)
Über die Pfefferminzen und deren Befall durch den Rostpilz *Puccinia menthae* Pers. Zeitschr. Pflanzenkr. 34: 101-107.
- Rostrup, E. 1894. (2772)
Phoma sanguinolenta. Ein den Samentrag der Möhre (*Daucus carota*) vernichtender Pilz. Zeitschr. Pflanzenkr. 4: 195-196.
- Rotherth, W. 1906. (2773)
Das Verhalten des Pflanzen gegenüber dem Aluminum. Bot. Zeit. 64: 43-52.
- Roussakov, L. 1923. (2774)
Observations sur l'influence des conditions météorologiques sur le développement de la rouilles des céréales. Rept. Intern. Conf. Phytopath. and Econ. Entomol. Holland, 277-280.
- _____. 1924. (2774a)
Peculiarities of the micro-climate in the midst of plants in connection with the development of cereal rusts (Russian). Trans. Russian Ent.-Phytopath. Cong. 4: 201-216.
- _____. 1925. (2775)
A mass infection of winter rye with *Puccinia coronifera* Kleb. in the fall of 1924. (German Summary). Jour. Div. Phytopath. Main Bot. Gard. R. S. S. R., 7-11.
- _____. 1927. (2776)
Cereal rusts in the Far East. (Trans. title). Mat. Mikol Fitopat. 6: 96-122.
- Roux, C. 1900. (2777)
Traité historique, critique et expérimental des rapports des plantes avec le sol et de la chlorose végétale. Paris.
- _____. 1908. (2778)
Les phytopathies edaphiques ou maladies des plantes attribuables aux substances minérales du sol. Ann. Soc. Bot., Lyon, 33: 1-41.
- Rubner. 1921. (2779)
Die Spätfröste und die Verbreitungsgrenzen unserer Waldbäume. Forstw. Centbl. 43: 41-49, 100-114.
- Rump, L. 1926. (2780)
Studien über den Gerstenhartbrand (*Ustilago hordei* Kell. u. Sw.). Forsch. Gebeite. Pflanzenkr. u. Immun. Pflanzen-reich 2: 21-76.
- Runk, C. R. 1928. (2781)
Effect of potash on chlorosis of soybeans. Jour. Amer. Soc. Agron. 20: 876-877.
- Ruprecht, R. W. 1915. (2782)
Toxic effect of iron and aluminum salts on clover seedlings. Mass. Agr. Exp. Sta. Bull. 161, 125-129.
- _____ and F. W. Morse. 1915. (2783)
The effect of sulfate of ammonia on soil. Mass. Agr. Exp. Sta. Bull. 165, 73-90.
- _____ and _____. 1917. (2784)
The cause of the injurious effect of sulfate of ammonia when used as a fertilizer. Mass. Agr. Exp. Sta. Bull. 176, 119-134.
- Rusnov, P. von. 1910. (2785)
Ueber die Feststellung von Rauchschaden im Nadelwald. Centbl. Gesam. Forstw. 36: 257-268 and Abst. in Exp. Sta. Rec. 23: 726.
- Russell, E. J. 1915. (2786)
Soil conditions and plant growth. London.
- _____. 1921. (2787)
Soil conditions and plant growth. London.
- Russell, H. L. 1898. (2788)
A bacterial rot of cabbage and allied plants. Wis. Agr. Exp. Sta. Bull. 65, 1-39.

- Ruston, A. G. 1911. (2789)
Effects of smoke on vegetation. Proc. Conf. Smoke Abatement League of Great Britain, Manchester, 21-22: 44-53.
- _____. 1920. (2790)
Air pollution by coal smoke. Jour. Min. Agr., London, 27: 69-77.
- _____. 1921. (2791)
The plant as an index of smoke pollution. Ann. Appl. Biol. 7: 390-402.
- Ruth, W. A. 1925. (2792)
The effect of drought on apple trees. Trans. Ill. State Hort. Soc. 59: 106-126.
- Sabachnikoff, V. 1913. (2793)
Contribution à l'études des fumées et des poussières industrielles dans leurs rapports avec la végétation. Thesis, Univ. Nancy. 252 pp.
- _____. 1917. (2794)
Les fumées industrielles et leur influence nocive sur la végétation. Vie Agr. et Rurale 7: 390-393.
- Sachs, J. 1886. (2795)
Das Eisen und die Chlorose der Pflanzen. Naturw. Rundschau 1: 257-259.
- _____. 1888. (2796)
Erfahrung über die Behandlung chlorotischer Gartenpflanzen. Arb. Bot. Inst., Würzburg, 3: 433-458.
- Sackett, W. G. 1910. (2798)
A bacterial disease of alfalfa. Colo. Agr. Exp. Sta. Bull. 158, 1-32.
- _____. 1916. (2799)
A bacterial stem blight of field and garden peas. Colo. Agr. Exp. Sta. Bull. 218, 1-43.
- Safro, V. I. 1913. (2800)
An investigation of lime-sulfur injury; its cause and prevention. Ore. Agr. Exp. Sta. Res. Bull. 2, 1-32.
- Sahasrabudhe, D. L. 1927. (2801)
A remedy for a die-back disease of orange trees. Agr. Jour. India 22: 114-117.
- Saito, K. 1904. (2802)
Eine neue Art der "Chinesischen-Hefe". Centbl. Bakt. 13: 153-160.
- Sajó, K. 1901. (2803)
Meteorologische Ansprüche von Oidium Tuckeri und Peronospora viticola. Zeitschr. Pflanzenkr. 11: 92-95.
- _____. 1901. (2804)
Verschiedene meteorologische Ansprüche der schädlichen Pilze. Prometheus 13: 132-135; 154-157.
- _____. 1902. (2805)
Weitere Mitteilungen über die meteorologischen Ansprüche der schädlichen Pilze. Zeitschr. Pflanzenkr. 12: 151-157.
- Salisbury, E. J. 1922. (2806)
Stratification and hydrogen-ion concentration of the soil in relation to leaching and plant succession with special reference to woodlands. Jour. Ecology 9: 220-240.
- _____. 1922. (2807)
The soils of Blakeny Point: A study of soil reaction and succession in relation to the plant covering. Ann. Bot. 36: 391-431.
- _____. 1925. (2808)
The incidence of species in relation to soil reaction. Jour. Ecology 13: 149-160.
- Salmon, E. S. 1900. (2809)
The strawberry mildew (*Sphaerotheca humuli* (DC.) Burr.). Jour. Roy. Hort. Soc., London, 25: 132-138.
- _____. 1904. (2810)
Cultural experiments with barley mildew, *Erysiphe graminis* DC. Ann. Mycol. 2: 70-99.
- _____. 1904-1905. (2811)
On a fungus disease of *Euonymus japonicus* L. Jour. Roy. Hort. Soc., London, 29: 434-442.
- _____. 1914. (2812)
American gooseberry mildew. Jour. Board Agr., London, 20: 1057-1079.
- _____. 1927. (2813)
On forms of the hop resistant to mildew (*Sphaerotheca humuli* (DC.) Burr.); VI. Temporary loss of immunity. Ann. Appl. Biol. 14: 263-275.
- Salmon, S. C. 1917. (2814)
Why cereals winterkill. Jour. Amer. Soc. Agron. 9: 353-380.

- _____. 1918. (2815)
Some factors in the winterkilling of grain crops. *Proc. Kan. Acad. Sci.* 28: 129-131.
- _____. 1918. (2816)
A preliminary note on soil moisture and temperature factors in the winter-killing of grain crops. *Science* 47: 173-174.
- Salter, R. M. and T. C. Mollvaine. 1920. (2817)
Effect of reaction of solution on germination of seeds and on growth of seedlings. *Jour. Agr. Res.* 19: 73-95.
- Sampson, A. W. 1912. (2818)
The relation of soil acidity to plant societies. *Proc. Soc. Amer. Foresters* 7: 51-57.
- Sampson, K. 1924. (2819)
Seasonal notes on the fungus diseases of grasses in the Aberystwyth district. *Agric. Prog.* 1: 106-107.
- Samuel, G. 1927. (2820)
On the shot-hole disease caused by *Clasterosporium carpophilum* and on the "shot-hole" effect. *Ann. Bot.* 41: 375-404.
- _____. and C. S. Piper. 1928. (2821)
Grey speck (manganese deficiency) disease of oats. *Jour. Dept. Agr. So. Aust.* 31: 696-705, 789-799.
- _____. and _____. 1929. (2822)
Manganese as an essential element for plant growth. *Ann. Appl. Biol.* 16: 493-524.
- Sanders, G. E. 1916. (2823)
Arsenate of lead versus arsenate of lime. *Proc. Ent. Soc. Nova Scotia* 2: 40.
- Sandsten, E. P. 1898. (2824)
The influence of gases and vapors upon the growth of plants. *Minn. Bot. Studies*, Ser. 2, 1: 53-68.
- Sanford, G. B. 1923. (2825)
The relation of soil moisture to the development of common scab of potato. *Phytopath.* 13: 231-236.
- _____. 1924. (2826)
Some factors influencing the development of potato scab. *Phytopath.* 14: 58-59. (Abst.).
- _____. 1926. (2827)
Some factors affecting the pathogenicity of *Actinomyces scabies*. *Phytopath.* 16: 525-547.
- _____. 1927. (2828)
Important soil-borne diseases of crops in Western Canada. *Sci. Agr.* 7: 292-294.
- _____. 1928. (2829)
Report of the Dominion Laboratory of Plant Pathology for Alberta. *Canada Dept. Agr., Div. Bot. Rept.*, 1927, 112-115.
- Sanson, J. 1928. (2830)
La sécheresse de l'été 1928 et ses répercussions sur les principales cultures. *Bull. Agr. (Paris)* 48 (1851): 27-29.
- _____. 1928. (2831)
Les effets des gelées du mois de Décembre 1927 sur les ensemencements des céréales en France. *Compt. Rend. Acad. Agr. France* 14: 592-600.
- Sartoris, G. B. 1929. (2832)
Low-temperature injury to stored sugar cane. *Jour. Agr. Res.* 38: 195-203.
- Sartory, A. 1927. (2833)
Étude de la concentration optima en ions H des milieux dans la culture de quelques champignons inférieurs. *Bull. Sci. Pharm.* 34: 75-79.
- _____. et al. 1930. (2834)
Étude d'une nouvelle espèce d'*Aspergillus*: *Aspergillus halophilus*. *Ann. Mycol.* 28: 362-363.
- Sasaki, S. 1929. (2835)
A Phomopsis disease of soy bean. *Jap. Jour. Bot.* 4: 102. (Abst.).
- Sattar, A. 1930. (2836)
Sorosporium paspali McAlp. on *Paspalum scrobiculatum* L., Kodra smut. *Imper. Inst. Agr. Res., Pusa, Bull.* 201, 1-16.
- Savastano, G. and H. S. Fawcett. 1928. (2837)
The effect of mixed inoculations of certain citrus fruit-rotting organisms. *Phytopath.* 18: 949. (Abst.).

- _____ and _____. 1929. (2838)
A study of decay in citrus fruits produced by inoculations with known mixtures of fungi at different constant temperatures. *Jour. Agr. Res.* 39: 163-198.
- Savastano, L. 1887. (2839)
Tuberculosi, perlasie e tumori dell'olivo. *Memoria I e II.* Naples.
- _____. 1922. (2840)
Studi ed esperimenti sul Marciume Radicale Degli Agrumi. *Ann. R. Staz. Sper. Agrumic. e. Fruttic. Acireale* 6: 125-138.
- Savulescu, T. and I. Radulescu. 1929. (2841)
Une nouvelle maladie bacterienne des feuilles du Tabac en Roumanie. *Trav. Inst. Recherches Agron. Roumanie.* 52 pp.
- Sawada, K. and C. Chen. 1926. (2842)
On the putrefaction disease of seedlings of *Antirrhinum majus* (Japanese). *Jour. Nat. Hist. Soc., Formosa*, 16: 199-212.
- Scaramuzzi, D. 1929. (2843)
Contributo allo studio dei danni da gelo. *Ital. Agr.* 66: 263-277.
- Schaaf, G. 1930. (2844)
Der Winter 1928-29 und seine Einwirkungen auf die Pflanzenwelt. *Aus der Heimat* 43: 33-43.
- Schaarschmidt, W. 1930. (2845)
Einfluss der Ernährung auf die Empfänglichkeit der Kulturpflanzen für parasitäre Krankheiten. *Ernähr. Pflanze* 26: 265-277.
- Schaffnit, E. 1909. (2846)
Biologische Beobachtungen über die Keimfähigkeit und Keimung der Uredo- und Aecidiensporen der Getreideroste. *Ann. Mycol.* 7: 509-523.
- _____. 1910. (2847)
Studien über den Einfluss niederer Temperaturen auf die pflanzliche Zelle. *Mitt. Kaiser Wilhelm's Inst. Landw.* 3: 93-115.
- _____. 1912. (2848)
Der Schneeschimmel und die übrigen durch *Fusarium nivale* Ces. hervorgerufenen Krankheitserscheinungen des Getreides. *Landw. Jahrb.* 43: 521-648.
- _____. 1922. (2849)
Zur Bekämpfung der Pilzkrankheiten des Getreidekorns. *Landw. Jahrb.* 57: 259-283.
- _____. 1930. (2850)
Ertragseinbussen im Getreidebau durch Fusskrankheiten. *Mitt. Deut. Landw. Ges.* 45: 1-5.
- _____ and K. Boning. 1925. (2851)
Die Brennfleckenkrankheiten der Bohnen, eine monographische Studie auf biologischer Grundlage. *Centbl. Bakt.* 63: 176-254, 360-438, 481-508.
- _____ and K. Meyer-Hermann. 1930. (2852)
Beiträge zur Kenntnis der Wechselbeziehungen zwischen Kulturpflanzen, ihren Parasiten und der Umwelt. (3 Mitteilung). Über den Einfluss der Bodenreaktion auf die Lebensweise von Pilzparasiten und das Verhalten ihrer Wirtspflanzen. *Phytopath. Zeitschr.* 2: 99-166.
- _____ and L. Rump. 1923. (2853)
Beobachtungen über Rostkrankheiten des Getreides. *Mitt. Deut. Landw. Ges.* 38: 624-628, 639-642.
- _____ and A. Volk. 1927. (2854)
Über den Einfluss der Ernährung auf die Empfänglichkeit der Pflanzen für Parasiten. (I. Teil). *Forsch. Gebiet. Pflanzenkr. u. Immun. Pflanzenreich* 3: 1-45.
- _____ and _____. 1930. (2855)
Beiträge zur Kenntnis der Wechselbeziehungen zwischen Kulturpflanzen, ihren Parasiten und der Umwelt. (II. Mitteilung). Über den Einfluss der Ernährung auf die Empfänglichkeit der Pflanzen für Parasiten. (II. Teil). *Phytopath. Zeitschr.* 1: 535-574.
- _____ and M. Wieben. 1928. (2856)
Untersuchungen über den Erreger der Federbuschsporenkrankheit *Dilophospora alopecuri* (Fr.) Fr. *Forsch. Gebiet. Pflanzenkr. u. Immun. Pflanzenreich* 5: 3-38.
- Schander, R. 1904. (2857)
Über die physiologische Wirkung der Kupfervitriolkalkbrühe. *Landw. Jahrb.* 33: 517-584.
- _____. 1911. (2858)
Die Berücksichtigung der Witterungsverhältnisse in den Berichten über Pflanzenschutz der Hauptsammelstellen für Pflanzenkrankheiten. *Jahrb. Ver. Angew. Bot.* 9: 1-22.

-
- _____. 1914. (2859)
Über Hagelbeschädigungen an Roggen, Weizen, Gerste und Hafer. Fuhling's Landw. Zeit. 63: 657-703.
-
- _____. 1927. (2860)
Physiologische Untersuchungen an blattrollkranken Kartoffeln. Landw. Vers. Sta. 105: 198-204.
-
- _____ and F. Krause. 1916. (2861)
Berichte über Pflanzenschutz der Abteilung für Pflanzenkrankheiten des Kaiser Wilhelm-Instituts für Landwirtschaft in Bromberg. Die Vegetationsperiod 1913-1914. Berlin.
-
- _____ and G. Schweizer. 1925. (2862)
Säurekrankheit der Kartoffelpflanzen. Pflanzenbau 2 (7): 103-106.
- Schätzlein, C. 1925. (2863)
Schädlingsbekämpfung mit Arsensalzen und Pflanzenwuchs. Anzeiger Schäd. 1: 25-27.
- Schellenberg, A. 1929. (2864)
Die Winterkälteschäden an den Obstbäumen und den Reben; Massnahmen zur Behandlung der geschädigten Pflanzen. Schweiz. Zeitschr. Obst- u. Weinb. 38: 206-215.
-
- _____. 1930. (2865)
Die Frühjahrs- und Winterfrostschäden in den zürcherischen Rebbergen der Jahre 1926, 1927, 1928, and 1929. Landw. Jahrb. Schweiz 44: 83-124.
- Schenk, P. J. 1926. (2866)
Zonnebrand. Floralia 47: 586-587.
- Scherpe, R. 1920. (2867)
Untersuchungen über die Ursache der Dörrfleckenkrankheit des Hafers. Arb. Biol. Reichsanst. Land- u. Forstw. 10: 307-358.
- Schiff-Giorgini, R. 1906. (2868)
Untersuchungen über die Tuberkelkrankheit des Oelbaumes. Centbl. Bakt. 15: 200-211.
- Schikorra, W. 1916. (2869)
Beiträge zur Dörrfleckenkrankheit des Hafers. Centbl. Bakt. 45: 578-586.
- Schilberszky, K. 1928. (2870)
Ecology of the potato fungus *Phytophthora infestans*. (Trans. title). Budapest. 98 pp.
- Schindler, F. 1880. (2871)
Ueber den Einfluss verschiedener Temperaturen auf die Keimfähigkeit der Steinbrandsporen. Forsch. Gebiet. Agr.-Physik. 3: 288-293.
- Schipper. 1925. (2872)
Die Habel- und Fusikladium-Empfindlichkeit unserer Obstsorten. Gartenwelt 29: 95-96.
- Schlegel, H. 1900. (2873)
Beobachtungen aus der Proxis über den Einfluss der Winter auf die Pilzkrankheiten des Weinflockes. Weinbau u. Weinhandel 18: 117-118.
- Schlumberger, O. 1929. (2874)
Hagel- und Frostschäden, ihre Feststellung und Bewertung. Illus. Landw. Zeit. 49: 265-266.
- Schmidt, E. 1928. (2875)
Schädigungen der Kartoffel durch Pilze der Gattung *Fusarium* Lk. Arb. Biol. Reichsanst. Land- u. Forstw. 15: 537-592.
- Schmidt, E. W. 1928. (2876)
Untersuchungen über die *Cercospora*-Blattfleckenkrankheit der Zuckerrübe. Zeitschr. Parasitenkunde 1: 100-137.
- Schmitt. 1930. (2877)
Einfluss des Bodens und der Düngung auf das Auftreten der Schwarzbeinigkeit des Weizens (*Ophiobolus graminis*). Superphosphate 6: 147.
- Schmitt, L. 1930. (2878)
Beiträge zur Frage der Giftwirkung von Arsenverbindungen auf den Boden und das Wachstum der Pflanze. Fortschr. Landw. 5: 633-637.
- Schmitz, N. 1910. (2879)
Wheat—variety tests and diseases. Md. Agr. Exp. Sta. Bull. 147, 33-45.
- Schneiderhan, F. J. 1925. (2880)
Rainfall in relation to ascospore discharge and infection in *Venturia inequalis*. Phytopath. 15: 56. (Abst.).
-
- _____. 1926. (2881)
Apple disease studies in northern Virginia. Va. Agr. Exp. Sta. Bull. 245, 1-35.
-
- _____ and F. D. Fromme. 1924. (2882)
Apple scab and its control in Virginia. Va. Agr. Exp. Sta. Bull. 236, 1-29.

- Schneider-Orelli, O. 1912. (2888)
Versuche über die Wachstumsbedingungen und Verbreitung der Fäulnispilze des Lagerobstes. Centbl. Bakt. 32: 161-169.
- , 1912. (2884)
Zur Kenntnis des mitteleuropäischen und des nordamerikanischen *Gloeosporium fructigenum*. Centbl. Bakt. 32: 459-467.
- Schoevers, T. A. C. 1929. (2885)
Een proef met zwavelzure kali tegen "randjesziekte" bij Roode Bessen. Versl. Meded. Plantenziek. Dienst, Wageningen, 58: 7-10.
- , 1929. (2886)
Een proef met zwavelzure kali tegen "Randjesziekte" bij roode bessen. Tijdschr. Plantenziek. 35: 231-233.
- Schollenberger, C. J. 1930. (2887)
Effect of leaking natural gas upon the soil. Soil Sci. 29: 261-266.
- Schreiber. 1892. (2888)
Über die Beziehungen zwischen dem Umsichgreifen der Rostkrankheit bei dem Weizen und den Witterungsverhältnissen. Zeitschr. Pflanzenkr. 2: 57-59. (Abst.).
- Schreiner, O. 1917. (2889)
Fertilizer studies on potash hunger of the potato. Proc. Amer. Potato Assoc. 4: 40-50.
- , B. E. Brown, J. J. Skinner, and M. Shapovalov. 1920. (2890)
Crop injury by borax in fertilizers. U. S. Dept. Agr., Dept. Circ. 84, 1-35.
- and P. R. Dawson. 1927. (2891)
Manganese deficiency in soils and fertilizers. Jour. Indus. and Engin. Chem. 19: 400-404.
- Schrenk, H. von. 1898. (2892)
The trees of St. Louis as influenced by the tornado of 1896. Trans. St. Louis Acad. Sci. 8: 25-40.
- , 1903. (2893)
On the production of wart-like intumescences produced by various fungicides. Science 17: 263.
- , 1905. (2894)
Glassy fir. Mo. Bot. Gard. Ann. Rept. 16, 117-120.
- , 1905. (2895)
Intumescences formed as a result of chemical stimulation. Mo. Bot. Gard. Rept. 16, 125-148.
- , 1907. (2896)
On frost injuries to sycamore buds. Mo. Bot. Gard. Ann. Rept. 18, 81-83.
- and P. Spaulding. 1909. (2897)
Diseases of deciduous forest trees. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 149, 1-85.
- Schribner, F. L. 1886. (2898)
Report on the fungous disease of the grape vine. U. S. Dept. Agr., Bot. Div. Bull. 2: 1-136.
- and P. Viala. 1888. (2899)
Black rot. U. S. Dept. Agr., Bot. Div. Bull. 7, 1-29.
- Schribaux, E. 1929. (2900)
Influence des engrais sur la résistance au froid du seigle d'hiver. Compt. Rend. Acad. Agr. France 15: 571-574.
- Schröder, J. von. 1872 and 1873. (2901)
Einwirkung der schwefligen Säure auf die Pflanzen. Landw. Vers. Sta. 15: 321-355; 16: 447-470.
- , 1880. (2902)
Ueber die Beschädigung der Vegetation durch saure Gase. Landw. Vers. Sta. 24: 392-423.
- and C. Reuss. 1883. (2903)
Die Beschädigung der Vegetation durch Rauch usw. Berlin.
- Schuckenberg, A. 1924. (2904)
Zur Kenntnis der Pflanzenschädigung auf sauren Böden. Zeitschr. Pflanzenernähr. u. Düng. 3 (A): 65-90.
- Schultz, E. S. 1916. (2905)
Silver-scurf of the Irish potato caused by *Spondylocadium atrovirens*. Jour. Agr. Res. 6: 339-350.
- Schulz, G. 1927. (2906)
Der Einfluss der Düngung des Bodens auf die Verbreitung der Getreideroste. Illus. Landw. Zeit. 47: 637.

-
1930. (2907)
Der Einfluss der Ernährung des Getreides auf den Befall durch Erysiphe graminis DC.
Wiss. Arch. Landw., Abt. A, 3: 371-388.
-
1930. (2907a)
Der Einfluss der Ernährung des Getreides auf den Befall durch Erysiphe graminis DC.
Centbl. Bakt. 82: 15-22. (Abst.).
- Schuster, G. L. 1929. (2908)
Chlorosis. Better Crops 12 (5): 20-21, 48-49.
- Schuster, J. 1912. (2909)
Zur Kenntnis der Bakterienfäule der Kartoffel. Arb. K. Biol. Anst. Land- u. Forstw. 8:
452-491.
- Schuster, L. 1914. (2910)
Hitzetod junger Pflanzen. Naturw. Zeitschr. Forst- u. Landw. 12: 377-379.
- Schwarz, M. B. 1926. (2911)
De roestvlekkenziekte van aardappelknollen in Nederlandsch Oost-Indie. Tijdschr.
Plantenziekten 32: 321-330.
- Schwytter, A. 1928. (2912)
Über eine eigentümliche Blitzbeschädigung im Walde. Mitteil. Thurgauischen Natur-
forsch. Ges. 27: 180-184.
- Scott, I. T. 1922. (2913)
Tomato wilt. Mo. Agr. Exp. Sta. Bull. 147, 49.
-
1924. (2914)
The influence of hydrogen-ion concentration on the growth of *Fusarium lycopersici* and
on tomato wilt. Mo. Agr. Exp. Sta. Res. Bull. 64, 1-32.
-
1929. (2915)
Hydrogen-ion equilibrium of mycelial mats of *Fusarium lycopersici* in salt solutions and
its relation to growth and toxicity. Amer. Jour. Bot. 16: 631-643.
- Scott, W. M. 1906. (2916)
The control of apple bitter-rot. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 93, 1-33.
-
1909. (2917)
Lime-sulphur mixtures for the summer spraying of orchards. U. S. Dept. Agr., Bur. Pl.
Indus. Circ. 27, 1-17.
-
- and T. W. Ayres. 1910. (2918)
The control of peach brown-rot and scab. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 174,
1-26.
-
- and J. B. Rorer. 1909. (2919)
Apple blotch, a serious disease of southern orchards. U. S. Dept. Agr., Bur. Pl. Indus.
Bull. 144, 1-23.
- Seal, J. L. 1928. (2920)
Coconut bud rot in Florida. Fla. Agr. Exp. Sta. Bull. 199, 1-87.
- Seelhorst, C. von. 1904. (2921)
Rübenbeschädigung durch Blitz. Deutsche Landw. Presse 31: 515-516.
-
1906. (2922)
Die durch Kalimangel bei Vietsbohnen, *Phaseolus vulgaris* nanus, hervorgerufenen
Erscheinungen. Zeitschr. Pflanzenkr. 16: 2-5.
- Seeley, D. A. 1922. (2923)
The great glaze storm of February 21-23, in Michigan. U. S. Dept. Agr., Mo. Weather
Rev. 50: 80-82.
- Selby, A. D. 1898. (2924)
Preliminary report upon diseases of the peach. Ohio Agr. Exp. Sta. Bull. 92, 179-236.
-
1898. (2925)
Some diseases of wheat and oats. Ohio Agr. Exp. Sta. Bull. 97, 31-61.
-
1899. (2926)
Variations in the amount of leaf curl of the peach (*Exoascus deformans*) in the light of
weather conditions. Proc. Soc. Prom. Agr. Sci. 20: 98-104.
-
1907. (2927)
On the occurrence of *Phytophthora infestans* Mont. and *Plasmopora cubensis* (B. & C.)
Humph. in Ohio. Ohio Nat. 7 (4): 79-85.
-
1908. (2928)
Fall and early winter injuries to orchard trees and shrubbery by freezing. Ohio Agr.
Exp. Sta. Bull. 192, 129-148.
- Sellschop, J. P. F. and S. C. Salmon. 1928. (2929)
The influence of chilling, above the freezing point, on certain crop plants. Jour. Agr.
Res. 37: 315-338.

- Sempolowski, A. 1895. (2930)
 Beitrag zur bekämpfung der Kartoffelkrankheit. Zeitschr. Pflanzenkr. 5: 203-204.
- Serrano, F. B. 1928. (2931)
 Bacterial fruitlet brown-rot of pineapple in the Philippines. Philippine Jour. Sci. 36: 271-305.
- Setchell, W. A. 1903. (2932)
 The upper temperature limits of life. Science 17: 934-937.
- Sette, N. 1930. (2933)
 Lésions observées chez d'autres végétaux cultivés dans les près d'une fabrique de per-phosphates. Soc. Internaz. Microbiol. Boll. Sez. Italiana 2: 252-254.
- Shapovalov, M. 1915. (2944)
 Effect of temperature on the germination and growth of the common potato-scab organ-ism. Jour. Agr. Res. 4: 129-133.
- _____. 1925. (2945)
 Ecological aspects of a pathological problem (Western yellow blight of tomatoes). Ecology 6: 241-259.
- _____. 1925. (2946)
 High evaporation: A precursor and a concomitant of western yellow tomato blight. Phytopath. 15: 470-478.
- _____. 1927. (2947)
 Inoculation experiments with western yellow tomato blight in relation to environmental conditions. Phytopath. 17: 746. (Abst.).
- _____ and F. S. Beecher. 1926. (2948)
 Menace of western yellow tomato blight. Pacific Rural Press 111: 365, 371.
- _____ and _____. 1928. (2949)
 The development of tomato yellows under different light conditions. Phytopath. 18: 950. (Abst.).
- _____ and H. A. Edson. 1921. (2950)
 Blackleg potato tuber-rot under irrigation. Jour. Agr. Res. 22: 81-92.
- Sharples, A. 1926. (2951)
 "Sun-scorch" of exposed lateral roots of *Hevea brasiliensis*. Malayan Agr. Jour. 14: 116-118.
- _____. 1928. (2952)
 Palm disease in Malaya. Malayan Agr. Jour. 16: 313-360.
- _____. 1929. (2953)
 Division of Mycology. Annual Report for 1928. Malayan Agr. Jour. 17: 294-308.
- _____. 1930. (2954)
 Division of Mycology. Annual Report for 1929. Dept. Agr. Straits Settlements and Fed. Malay States Tech. Repts. 1929, Bull. 3, 62-72.
- Shaw, C. H. 1909. (2955)
 The cause of timber line on mountains: the rôle of snow. Plant World 12: 169-181.
- Shaw, F. J. F. 1922. (2956)
 A diseased condition of rice. Agr. Jour. India 17: 152-154.
- _____. 1924. (2957)
 Some factors in the incidence of plant diseases. Proc. Indian Sci. Cong., Calcutta, 10: 192.
- Shaw, G. W. 1907. (2958)
 Cereal investigations. Calif. Agr. Exp. Sta. Bull. 185, 261-310.
- Shaw, H. B. 1910. (2959)
 The curly-top of beets. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 181, 1-40.
- Shear, C. L. 1913. (2960)
 Some observations on phytopathological problems in Europe and America. Phytopath. 3: 77-87.
- _____. 1920. (2961)
 Cranberry diseases and their control. U. S. Dept. Agr., Farmers' Bull. 1081, 1-22.
- _____ and H. F. Bain. 1929. (2962)
 Life history and pathological aspects of *Godronia cassandrae* Peck (*Fusicoccum putrefaciens* Shear) on cranberry. Phytopath. 19: 1017-1024.
- _____ and G. F. Miles. 1908. (2963)
 Texas root-rot of cotton: Field experiments in 1907. U. S. Dept. Agr., Bur. Pl. Indus. Circ. 9, 1-7.
- _____ and N. E. Stevens. 1913. (2964)
 Cultural characters of the chestnut-blight fungus and its near relatives. U. S. Dept. Agr., Bur. Pl. Indus. Circ. 131, 1-18.

- _____, _____, and B. A. Rudolph. 1917. (2965)
Observations on the spoilage of cranberries due to lack of proper ventilation. Mass. Agr. Exp. Sta. Bull. 180, 235-239.
- Sheldon, J. L. 1905. (2966)
The effect of different soils on the development of the carnation rust. Bot. Gaz. 40: 225-229.
- Sherbakoff, C. D. 1917. (2967)
Black spot and brown spot of tomato. Fla. Agr. Exp. Sta. Ann. Rept., 1916, 90-91.
- _____. 1917. (2968)
Some important diseases of truck crops in Florida. Fla. Agr. Exp. Sta. Bull. 139, 191-277.
- _____. 1918. (2969)
Bacterial spot of pepper. Fla. Agr. Exp. Sta. Ann. Rept., 1917, 79-83.
- _____. 1927. (2971)
Plant pathology. Tenn. Agr. Exp. Sta. Ann. Rept. 39, 37-41.
- Sherwood, E. C. 1923. (2972)
Hydrogen-ion concentration as related to the Fusarium wilt of tomato seedlings. Amer. Jour. Bot. 10: 537-553.
- Shipley, A. 1887. (2973)
Onion disease at Bermuda. Agr. Sci. 1: 261-262. (Abst.).
- Shoemaker, J. S. 1924. (2974)
Lime sulfur injury. Sci. Agr. 4: 180-184.
- Shreve, F. 1914. (2975)
The rôle of winter temperatures in determining the distribution of plants. Amer. Jour. Bot. 1: 194-202.
- Sibilia, C. 1928. (2976)
Ricerche sulle ruggini dei cereali. Boll. R. Staz. Pat. Veg. 8: 235-247.
- Sideris, C. P. 1926. (2977)
Review of physiological and pathological studies on the pineapple plant. Hawaiian Pineapple Cannery's Sta. Bull. 8, 1-10.
- _____. 1926. (2978)
Influence of environmental factors on the development of plant diseases. (Trans. title). Parnassos, New York, 1: 26-28.
- _____. 1928. (2979)
Similarity between physicochemical and biological reactions. Plant Physiol. 3: 79-83.
- _____. 1929. (2980)
The effect of the H-ion concentration of the culture solution on the behavior of Fusarium corymophthorum and Allium cepa and the development of pink-root disease symptoms. Phytopath. 19: 233-268.
- _____. 1929. (2981)
Stem rot of pineapple plants. Phytopath. 19: 1146. (Abst.).
- Sidorin, M. I. 1917. (2982)
On the assimilation of iron by plants. (Trans. title). Exp. Sta. Rec. 36: 633.
- Sievers, F. J. 1924. (2983)
Crop injury resulting from magnesium oxide dust. Phytopath. 14: 108-113.
- Simmonds, J. H. 1928. (2984)
Diseases of the banana in Queensland. Queensland Agr. Jour. 30: 438-454.
- _____. 1930. (2985)
Brown spot of the Passion Vine. Queensland Dept. Agr. and Stock, Div. Ent. and Plant Path. Bull. 6, 1-15.
- Simmonds, P. M. 1928. (2986)
Seedling blight and foot-rots of oats caused by Fusarium culmorum (W. G. Sm.). Sacc. Canada Dept. Agr. Bull. 105, 1-43.
- Simon, J. 1909. (2987)
Über die Einwirkung eines verschiedenen Kupfergehaltes im Boden auf das Wachstum der Pflanze. Landw. Vers. Sta. 71: 417-429.
- Simpson, C. T. 1903. (2988)
Effects on vegetation of the hurricane in Florida. Plant World 6: 284-285.
- Sirrine, F. A. 1900. (2989)
Spraying for asparagus rust. N. Y. (Geneva) Agr. Exp. Sta. Bull. 188, 233-276.
- Sjögren, H. 1928. (2990)
Vad bör göras för att motverka rotbrand? Landtmannen 11: 659.

- Skeen, J. R. 1929. (2991)
The tolerance limit of seedlings for aluminum and iron and the antagonism of calcium. Soil Sci. 27: 69-80.
- Skinner, J. J. and F. E. Allison. 1923. (2992)
Influence of fertilizers containing borax on the growth and fruiting of cotton. Jour. Agr. Res. 23: 433-443.
- _____, B. E. Brown, and F. R. Reid. 1923. (2993)
The effect of borax on the growth and yield of crops. U. S. Dept. Agr., Dept. Bull. 1126, 1-30.
- _____, and J. B. Demaree. 1926. (2994)
Relation of soil conditions and orchard management to the rosette of pecan trees. U. S. Dept. Agr., Dept. Bull. 1378, 1-16.
- _____, and F. R. Reid. 1916. (2995)
The action of manganese under acid and neutral soil conditions. U. S. Dept. Agr., Dept. Bull. 441, 1-12.
- _____, and M. X. Sullivan. 1914. (2996)
The action of manganese in soils. U. S. Dept. Agr., Dept. Bull. 42, 1-32.
- Skoric, V. 1926. (2997)
Causes of dying away of our oak-forests. (Jugoslavian). Ann. Exp. Forestry, Zagreb, 1: 234-246.
- Slagg, C. M. 1926. (2998)
New and unusual diseases and injuries of tobacco. Sci. Agr. 6: 193-198.
- Small, T. 1925. (2999)
"Rhizoctonia foot-rot" of the tomato. Exp. and Res. Sta., Cheshunt, Herts., Ann. Rept. 11, 76-85.
- _____. 1927. (3000)
A disease of the strawberry. Exp. and Res. Sta., Cheshunt, Herts., Ann. Rept. 12, 38-39.
- _____. 1927. (3001)
Rhizoctonia "foot-rot" of the tomato. Ann. Appl. Biol. 14: 290-295.
- _____. 1928. (3002)
A disease of the strawberry plant. Exp. and Res. Sta., Cheshunt, Herts., Ann. Rept. 13, 45-46.
- _____. 1928. (3003)
Tomato leaf-mould. Exp. and Res. Sta., Cheshunt, Herts., Ann. Rept. 13, 46-51.
- _____. 1928. (3004)
A disease of the strawberry plant. Jour. Pomol. and Hort. Sci. 7: 212-215.
- _____. 1929. (3005)
Tomato "mildew" or leaf-mould. Exp. and Res. Sta., Cheshunt, Herts., Ann. Rept. 14, 45-62.
- _____. 1930. (3006)
Tomato leaf mould. Exp. and Res. Sta., Cheshunt, Herts., Ann. Rept. 15, 43-51.
- _____. 1930. (3007)
The relation of atmospheric temperature and humidity to tomato leaf mould (Cladosporium fulvum). Ann. Appl. Biol. 17: 71-80.
- Smiley, E. M. 1920. (3008)
The Phyllosticta blight of snapdragon. Phytopath. 10: 232-248.
- Smith, A. J. M. 1926. (3009)
Bitter pit in apples: A review of the problem. Dept. Sci. and Indus. Res., Food Invest. Board Spec. Rept., Great Britain, 28, 1-24.
- _____. 1926. (3010)
The development of bitter pit in stored apples. Dept. Sci. and Indus. Res., Food Invest. Board Rept., Great Britain, 1925-1926, 59-61.
- Smith, C. M. 1923. (3011)
Excretions from leaves as a factor in arsenical injury to plants. Jour. Agr. Res. 26: 191-194.
- Smith, C. O. 1921. (3012)
Some studies relating to infection and resistance to walnut blight. Calif. Dept. Agr. Mo. Bull. 10, 367-371.
- _____. 1928. (3013)
Oleander bacteriosis in California. Phytopath. 18: 503-518.
- _____, and H. S. Fawcett. 1930. (3014)
A comparative study of the citrus blast bacterium and some other allied organisms. Jour. Agr. Res. 41: 233-246.

- Smith, E. F. 1893. (3015)
Experiments with fertilizers for the prevention and cure of peach yellows. U. S. Dept. Agr., Div. of Veg. Path. Bull. 4, 1-197.
- _____. 1894. (3016)
Apple scab. Jour. Mycol. 7: 373-374.
- _____. 1895. (3017)
Bacillus tracheiphilus sp. nov., die Ursache des Verwelkens verschiedener Cucurbitaceen. Centbl. Bakt. 1: 364-373.
- _____. 1896. (3018)
A bacterial disease of the tomato, eggplant and Irish potato. U. S. Dept. Agr., Div. Veg. Physiol. and Path. Bull. 12, 1-26.
- _____. 1901. (3019)
The cultural characters of *Pseudomonas hyacinthi*, *Ps. campestris*, *Ps. phaseoli*, *Ps. stewartii*—four one-flagellate yellow bacteria on plants. U. S. Dept. Agr., Div. Veg. Physiol. and Path. Bull. 28, 1-153.
- _____. 1903. (3020)
Observations on a hitherto unreported bacterial disease, the cause of which enters the plant through ordinary stomata. Science 17: 456-457.
- _____. 1904. (3021)
Bacterial leaf spot diseases. Science 19: 417-418.
- _____. 1906. (3022)
Some observations on the biology of the olive-tubercle organism. Centbl. Bakt. 15: 198-200.
- _____. 1908. (3023)
Recent studies of the olive-tubercle organism. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 131, 25-43.
- _____. 1910. (3024)
Bacillus phytophthorus Appel. Science 31: 748-749.
- _____. 1910. (3025)
Bacterial blight of mulberry. Science 31: 792-794.
- _____. 1911. (3026)
Bacteria in relation to plant diseases 2: 1-368. Washington.
- _____. 1914. (3027)
Bacteria in relation to plant diseases 3: 1-307. Washington.
- _____. 1915. (3028)
A conspectus of bacterial diseases of plants. Ann. Mo. Bot. Gard. 2: 377-401.
- _____. 1920. (3029)
Bacterial diseases of plants. Washington.
- _____, N. A. Brown, and C. O. Townsend. 1911. (3030)
Crown-gall of plants: Its cause and remedy. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 213, 1-215.
- _____ and M. K. Bryan. 1915. (3031)
Angular leaf-spot of cucumbers. Jour. Agr. Res. 5: 465-475.
- _____ and F. Hedges. 1905. (3031a)
Burrill's bacterial disease of broom corn. Science 21: 502-503.
- _____ and A. J. Quirk. 1926. (3032)
A *Begonia* immune to crown-gall: with observations on other immune or semi-immune plants. Phytopath. 16: 491-508.
- _____ and D. B. Swingle. 1904. (3033)
Dry rot of potatoes due to *Fusarium oxysporum*. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 55, 1-62.
- Smith, E. H. 1907. (3034)
The blossom-end rot of tomatoes. Mass. Agr. Exp. Sta. Tech. Bull. 3, 1-19.
- Smith, F. E. V. 1924. (3035)
Three diseases of cultivated mushrooms. Trans. Brit. Mycol. Soc. 10: 81-97.
- Smith, F. F. 1926. (3035a)
Some cytological and physiological studies of mosaic diseases and leaf variegations. Ann. Mo. Bot. Gard. 13: 425-484.
- Smith, J. H. 1923. (3036)
The killing of *Botrytis* spores by heat, with a note on the determination of temperature coefficients. Ann. Appl. Biol. 10: 335-347.
- Smith, J. W. 1912. (3037)
Winter damage to peaches. U. S. Dept. Agr., Mo. Weather Rev. 40: 29-30.

- _____. 1920. (3038)
Damage to crops by weather. U. S. Dept. Agr., Mo. Weather Rev. 48: 446.
- Smith, K. M. 1929. (3039)
Studies on potato virus diseases. IV. Further experiments with potato mosaic. Ann. Appl. Biol. 16: 1-33.
- Smith, M. A. 1926. (3040)
Infection and spore germination studies with *Puccinia sorghi*. Phytopath. 16: 69. (Abst.).
- Smith, R. E. 1904. (3041)
The water-relation of *Puccinia asparagi*. Bot. Gaz. 38: 19-43.
- _____. 1905. (3042)
Asparagus and asparagus rust in California. Calif. Agr. Exp. Sta. Bull. 165, 1-99.
- _____. 1914. (3043)
Plant pathology. "Physiological" plant diseases. Calif. Agr. Exp. Sta. Ann. Rept., 1913-1914, 139-142.
- _____. et al. 1912. (3044)
Walnut culture in California; walnut blight. Calif. Agr. Exp. Sta. Bull. 231, 119-398.
- _____. and O. Butler. 1908. (3045)
Gum disease of citrus trees in California. Calif. Agr. Exp. Sta. Bull. 200, 235-270.
- _____. and E. H. Smith. 1911. (3046)
California plant diseases. Calif. Agr. Exp. Sta. Bull. 218, 1039-1193.
- Smith, R. G. 1926. (3047)
Storage scald on apples. Mich. State Hort. Soc. Ann. Rept. 55, 134-135.
- Smith, T. O. and O. Butler. 1921. (3048)
Relation of potassium to growth in plants. Ann. Bot. 35: 189-225.
- Smith, W. 1924. (3049)
Wind damage and its prevention. Calif. Citrogr. 9: 124, 144.
- Snell, W. H. 1920. (3050)
Observations on the distance of spread of aeciospores and urediniospores of *Cronartium ribicola*. Phytopath. 10: 358-364.
- _____. 1922. (3051)
Studies of certain fungi of economic importance in the decay of building timbers, with special reference to the factors which favor their development and dissemination. U. S. Dept. Agr., Dept. Bull. 1053, 1-47.
- _____. 1923. (3052)
The effect of heat upon the mycelium of certain structural-timber-destroying fungi within wood. Amer. Jour. Bot. 10: 399-411.
- _____. 1928. (3053)
Blister rust in the Adirondacks. Jour. Forestry 26: 472-486.
- _____. 1929. (3054)
Some observations upon the white pine blister rust in New York. Phytopath. 19: 269-283.
- _____. and N. O. Howard. 1922. (3055)
Chemical injuries to white pines. Phytopath. 12: 59. (Abst.).
- _____. W. G. Hutchinson, and K. H. N. Newton. 1928. (3056)
Temperature and moisture relations of *Fomes roseus* and *Trametes subrosea*. Mycologia 20: 276-291.
- Snowden, R. R. 1910. (3057)
The proportions of lime to magnesia in the soil, and their relation to nutrition in citrus trees. Proc. Fruit Growers' Conv. Calif. 37: 76-82.
- Solender, H. 1904. (3058)
Über Frostblasen und Frostflecken an Blättern. Centbl. Bakt. 12: 253-262.
- Sommer, A. L. 1926. (3059)
Studies concerning the essential nature of aluminum and silicon for plant growth. Univ. Calif. Publ. Agr. Sci. 5: 57-81.
- _____. and H. Sorokin. 1928. (3060)
Effects of the absence of boron and of some other essential elements on the cell and tissue structure of the root tips of *Pisum sativum*. Plant Physiol. 3: 237-254.
- Sorauer, P. 1891. (3061)
Über Frostschorf an Apfel- und Birnenstämmen. Zeitschr. Pflanzenkr. 1: 137-145.
- _____. 1893. (3062)
Einige Beobachtungen bei der Anwendung von Kupfermitteln gegen die Kartoffelkrankheit. Zeitschr. Pflanzenkr. 3: 32-36.

- _____. 1893. (3063)
Welche Werte hat Preussen im Jahre 1891 durch die Getreideroste verloren? Zeitschr. Pflanzenkr. 3: 185-190.
- _____. 1894. (3064)
Das Verhalten des Getreiderostes in trockenen und nassen Jahren. Zeitschr. Pflanzenkr. 4: 121-124.
- _____. 1895. (3065)
Über die Wurzelbrüune der Cyclamen. Zeitschr. Pflanzenkr. 5: 18-20.
- _____. 1897. (3066)
Die Beschädigungen der Vegetation durch Asphaltdämpfe. Zeitschr. Pflanzenkr. 7: 10-20.
- _____. 1897. (3067)
XXVI. Zur Frage der Praedisposition. Zeitschr. Pflanzenkr. 7: 193-196.
- _____. 1897. (3068)
Feldversuche zwecks Feststellung einer Abhängigkeit der bakteriosen Gummosis der Zuckerrüben von Witterungs- und Bodeneinflüssen. Centbl. Bakt. 3: 535. (Abst.).
- _____. 1901. (3069)
Die Frostschäden an den Wintersaaten des Jahres 1901. Arb. Deut. Landw. Ges. 62: 204.
- _____. 1902. (3070)
Frostblasen an Blättern. Zeitschr. Pflanzenkr. 12: 44-47.
- _____. 1903. (3071)
Über Frostbeschädigungen am Getreide und damit in Verbindung stehende Pilzkrankheiten. Landw. Jahrb. 32: 1-68.
- _____. 1903. (3072)
Über die Praedisposition der Pflanzen für parasitäre Krankheiten. Arb. Deut. Landw. Ges. 82: 193-210.
- _____. 1904. (3073)
Beiträge zur anatomischen Analyse rauchbeschädigter Pflanzen. Landw. Jahrb. 33: 585-664.
- _____. 1906. (3074)
Experimentelle Studien über die mechanischen Wirkungen des Frostes bei Obst- und Waldbäumen. Landw. Jahrb. 35: 469-526.
- _____. 1907. (3075)
Blitzspuren und Frostspuren. Ber. Deutsch. Bot. Ges. 25: 157-164.
- _____. 1908. (3076)
Die Pflanzlichen Parasiten. pp. 517-527. Berlin.
- _____. 1909. (3077)
Vorarbeiten für eine internationale Statistik der Getreideroste. Zeitschr. Pflanzenkr. 19: 193-286.
- _____. 1909. (3078)
Pflanzenkrankheiten. Berlin.
- _____. 1910, 1911, 1912, 1914. (3079)
Untersuchungen über Gummifluss und Frostwirkungen bei Kirschbäumen. Landw. Jahrb. 39: 259-298; 41: 131-162; 42: 719-750; 46: 253-273.
- _____. 1911. (3080)
Tumor und Apfelbäumen. Zeitschr. Pflanzenkr. 21: 27-36.
- _____. 1914. (3081)
Altes und Neues über die mechanischen Frostbeschädigungen. Zeitschr. Pflanzenkr. 24: 65-76.
- _____. 1915. (3082)
Über Wirkungen von Leuchtgas auf die Pflanzen. Landw. Jahrb. 48: 279-312.
- _____. 1916. (3083)
Untersuchungen über Leuchtgasbeschädigungen. Zeitschr. Pflanzenkr. 26: 129-183.
- _____. and E. Ramann. 1899. (3084)
Sogenannte unsichtbare Rauchbeschädigung. Bot. Centbl. 80: 50-56, 106-116, 156-168, 205-216, 251-262.
- Sordina, J. 1918. (3085)
Influence de la sécheresse et du champignon Alternaria sur la pomme de terre. Prog. Agr. et Vitic. 69: 131-134.
- Soursac, L. 1924. (3086)
Le rougeau et la sécheresse. Prog. Agr. et Vitic. 82: 116-118.

- _____. 1927. (3087)
Observations sur le court-noué de la vigne. *Prog. Agr. et Vitic.* 88: 573-575.
- Späth and Meyer. 1873. (3088)
Beobachtungen über den Einfluss des Leuchtgases auf die Vegetation von Bäumen.
Landw. Vers. Sta. 16: 336-341.
- Spaulding, P. 1911. (3089)
The blister rust of white pine. *U. S. Dept. Agr., Bur. Pl. Indus. Bull.* 206, 1-88.
- _____. 1914. (3090)
The damping-off of coniferous seedlings. *Phytopath.* 4: 73-87.
- _____. 1922. (3091)
Investigations of the white-pine blister rust. *U. S. Dept. Agr., Dept. Bull.* 957, 1-100.
- _____. 1925. (3092)
A partial explanation of the relative susceptibility of the white pines to the white pine blister rust (*Cronartium ribicola* Fischer). *Phytopath.* 15: 591-597.
- _____. 1929. (3093)
White pine blister rust: a comparison of European with North American conditions.
U. S. Dept. Agr., Tech. Bull. 87, 1-59.
- _____. 1929. (3094)
Decay of slash of Northern White Pine in southern New England. *U. S. Dept. Agr., Tech. Bull.* 132, 1-20.
- _____. and A. Rathbun-Gravatt. 1925. (3095)
Conditions antecedent to the infection of white pines by *Cronartium ribicola* in the northeastern United States. *Phytopath.* 15: 573-583.
- _____. and _____. 1926. (3096)
The influence of physical factors on the viability of sporidia of *Cronartium ribicola* Fisher. *Jour. Agr. Res.* 33: 397-433.
- Spieckermann, A. 1910. (3097)
Über eine noch nicht beschriebene bakterielle Gefässerkrankung der Kartoffelpflanze.
Centbl. Bakt. 27: 205-208.
- Spierenburg, D. 1928. (3098)
Een geval van beschadiging aan rozen door bliksem. *Tijdschr. Plantenziek.* 34 (9): 239-242.
- Spinks, G. T. 1913. (3099)
Factors affecting susceptibility to disease in plants. *Jour. Agr. Sci.* 5: 231-247.
- Sprague, R. and F. D. Heald. 1927. (3100)
A witches' broom of the service berry. *Trans. Amer. Microsp. Soc.* 46: 219-238.
- Staar, G. 1930. (3101)
Beiträge zur 'indirect Diagnose' von Hagelfällen. *Pflanzenbau* 6: 317-328.
- Stair, E. C. et al. 1928. (3102)
Forced ventilation as a means of controlling tomato *Cladosporium* and *Septoria* in hot-beds. *Phytopath.* 18: 1027-1029.
- Stakman, E. C. 1913. (3103)
Spore germinations of cereal smuts. *Minn. Agr. Exp. Sta. Bull.* 133, 1-48.
- _____. 1914. (3104)
A study in cereal rusts. *Minn. Agr. Exp. Sta. Bull.* 138, 1-54.
- _____. 1919. (3105)
The black stem rust and the barberry. *U. S. Dept. Agr. Yrbk.*, 1918, 75-100.
- _____. and O. S. Aamodt. 1922. (3106)
The effect of fertilizers on the development of stem rust of wheat. *Phytopath.* 12: 31. (Abst.).
- _____. and _____. 1924. (3107)
The effect of fertilizers on the development of stem rust of wheat. *Jour. Agr. Res.* 27: 341-379.
- _____. and E. B. Lambert. 1928. (3108)
The relation of temperature during the growing season in the spring wheat area of the United States to the occurrence of stem rust epidemics. *Phytopath.* 18: 369-374.
- _____. and M. N. Levine. 1919. (3109)
Effect of certain ecological factors on the morphology of the urediniospores of *Puccinia graminis*. *Jour. Agr. Res.* 16: 43-77.
- _____. and F. J. Piemeisel. 1917. (3110)
Biologic forms of *Puccinia graminis* on cereals and grasses. *Jour. Agr. Res.* 10: 429-495.

- Staner, P. and G. Verplancke. 1930. (3111)
Étude d'un état pathologique du Sisal au Congo Belge. Bull. Inst. Roy. Colon. Belge 1: 279-300.
- Stanford, H. R. 1930. (3112)
 Warning on scaly bark treatments. Calif. Citrogr. 15: 119.
- Stapledon, R. G. 1926. (3113)
 Winter "burn" (or "browning") of herbage plants. Jour. Min. Agr. Great Britain 32: 1002-1015.
- Stapp, C. 1928. (3114)
 Die Schwarzbeinigkeit und Knollennassfäule der Kartoffel. Arb. Biol. Reich. Land- u. Forstw. 16: 643-703.
- _____. 1930. (3115)
 Beiträge zur Kenntnis des *Bacterium sepedonicum* Spieckerm. et Kotth., des Erregers der "Bakterienringfäule" der Kartoffel. Zeitschr. Parasitenkunde 2: 756-823.
- Starring, C. C. 1924. (3116)
 Premature seeding of celery. Mont. Agr. Exp. Sta. Bull. 168, 1-16.
- Staubacher. 1924. (3117)
 Die Frostschäden im Forstbetrieb, deren Ursachen und Bekämpfung. Forstw. Centbl. 46: 1-13, 54-66, 98-111.
- Steglich, B. 1892. (3117a)
 Blitzschlag im Kartoffelocker. Jahrb. Deut. Landw. Ges. 7: 208.
- _____. 1901. (3118)
 Untersuchungen und Beobachtungen über die Wirkung verschiedener salzlösungen auf Kulturpflanzen und Unkräuter. Zeitschr. Pflanzenkr. 11: 31-33.
- _____. 1903. (3119)
 Versuch über die Wirkung des Kupfervitriols im Boden auf die Vegetation. Ber. Tät. Landw. Abt., K. Vers. Sta. Pflanzenkult. Dresden, 4.
- Stehlik, V. 1929. (3120)
 Über Hagelschäden an Zuck- und Industrierüben. Zeitschr. Zuckerindus. Cechoslovak. Repub. 53: 400-404.
- Steinberg. 1929. (3121)
 Beobachtungen über die Frostschutzwirkung von Kalisalzdüngung bei Wintergetreide. Ernähr. Pflanze 25: 449-450.
- Steinberg, R. A. 1919. (3122)
 A study of some factors influencing the stimulative action of zinc sulfate on the growth of *Aspergillus niger*. Bull. Torrey Bot. Club 46: 1-20.
- _____. 1919. (3123)
 A study of some factors in the chemical stimulation of the growth of *Aspergillus niger*. Amer. Jour. Bot. 6: 330-372.
- Stell, F. 1927. (3124)
 Plant pathology. Trinidad and Tobago Admin. Rept. Dept. Agr., 1926, 35-36.
- Stender, A. 1902. (3125)
 Untersuchungen über die Unkrautvertilgung durch Düngesalze. Diss. Rostock.
- Stevens, F. L. 1898. (3126)
 The effect of aqueous solutions upon the germination of fungous spores. Bot. Gaz. 26: 377-406.
- _____. 1917. (3127)
 Problems of plant pathology. Bot. Gaz. 63: 297-306.
- _____. and J. G. Hall. 1909. (3128)
 Variation of fungi due to environment. Bot. Gaz. 48: 1-30.
- _____. and _____. 1911. (3129)
 A serious lettuce disease and a method of control. N. C. Agr. Exp. Sta. Tech. Bull. 8, 87-145.
- Stevens, H. E. 1918. (3130)
 Melanose II. Fla. Agr. Exp. Sta. Bull. 145, 101-116.
- _____. 1918. (3131)
 Florida citrus diseases. Fla. Agr. Exp. Sta. Bull. 150, 14-110.
- _____. 1918. (3132)
 Lightning injury to citrus trees in Florida. Phytopath. 8: 283-285.
- Stevens, N. E. 1916. (3133)
 A method for studying the humidity relations of fungi in culture. Phytopath. 6: 428-432.

- _____. 1917. (3134)
The influence of certain climatic factors on the development of *Endothia parasitica* (Murr.) And. Amer. Jour. Bot. 4: 1-32.
- _____. 1917. (3135)
The influence of temperature on the growth of *Endothia parasitica*. Amer. Jour. Bot. 4: 112-118.
- _____. 1917. (3136)
Some factors influencing the prevalence of *Endothia gyrosa*. Bull. Torrey Bot. Club 44: 127-144.
- _____. 1917. (3137)
Temperatures of the cranberry regions of the United States in relation to the growth of certain fungi. Jour. Agr. Res. 11: 521-529.
- _____. 1922. (3138)
Environmental temperatures of fungi in nature. Amer. Jour. Bot. 9: 385-390.
- _____ and H. F. Bain. 1928. (3139)
Storage rots of cranberries in the 1927 crop. Phytopath. 18: 809-814.
- _____ and R. B. Wilcox. 1917. (3140)
Rhizopus rot of strawberries in transit. U. S. Dept. Agr., Dept. Bull. 531, 1-22.
- Stevenson, J. A. 1917. (3141)
Lightning injury to sugar cane. Phytopath. 7: 317-318.
- _____. 1918. (3142)
Citrus diseases in Porto Rico. Jour. Dept. Agr. Porto Rico 2: 43-123.
- Stewart, F. C. 1894. (3143)
Effects of heat upon germination of corn and smut. Proc. Iowa Acad. Sci. 2: 174-178.
- _____. 1896. (3144)
Prevention of cabbage club-root. N. Y. (Geneva) Agr. Exp. Sta. Ann. Rept. 14, 525-529.
- _____. 1896. (3145)
Combating carnation rust. N. Y. (Geneva) Agr. Exp. Sta. Bull. 100, 36-68.
- _____. 1897. (3146)
Experiments and observations on some diseases of plants. N. Y. (Geneva) Agr. Exp. Sta. Bull. 138, 627-644.
- _____. 1899. (3147)
Leaf scorch of the sugar beet, cherry, cauliflower and maple. N. Y. (Geneva) Agr. Exp. Sta. Bull. 162, 165-178.
- _____ and F. H. Blodgett. 1899. (3148)
A fruit-disease survey of the Hudson valley in 1899. N. Y. (Geneva) Agr. Exp. Sta. Bull. 167, 275-308.
- _____ and H. J. Eustace. 1902. (3149)
Two unusual troubles of apple foliage. N. Y. (Geneva) Agr. Exp. Sta. Bull. 220, 217-233.
- _____, G. T. French, and J. K. Wilson. 1908. (3150)
Troubles of alfalfa in New York. N. Y. (Geneva) Agr. Exp. Sta. Bull. 305, 331-416.
- _____ and _____. 1912. (3151)
A comparative test of lime-sulphur, lead benzoate and bordeaux mixture for spraying potatoes. N. Y. (Geneva) Agr. Exp. Sta. Bull. 347, 1-14.
- _____ and A. J. Mix. 1917. (3152)
Blackheart and the aeration of potatoes in storage. N. Y. (Geneva) Agr. Exp. Sta. Bull. 436, 319-362.
- _____, F. M. Rolfs, and F. H. Hall. 1900. (3153)
A fruit-disease survey of Western New York in 1900. N. Y. (Geneva) Agr. Exp. Sta. Bull. 191, 291-331.
- Stewart, G. and D. W. Pittman. 1928. (3154)
Predisposition of sugar-beets to late rootrot. Phytopath. 18: 263-276.
- Stewart, J. P. 1910. (3155)
A new disease of apples. Pa. State College Ann. Rept., 1909-1910, 267-268.
- Stewart, V. B. 1915. (3156)
Notes on the fire blight disease. Phytopath. 5: 327-334.
- Stiles, W. 1930. (3157)
On the cause of cold death of plants. Protoplasma 9: 459-468.
- Stillinger, C. R. 1929. (3158)
Dosyscypha fusco-sanguinea Rehm on western white pine, *Pinus monticola* Dougl. Phytopath. 19: 575-584.
- Stockdale, F. A. 1916. (3159)
Phytopathology. Dept. Agr. Mauritius. Ann. Rept., 1915, 14-16.

- Stockhardt, A. 1871. (3160)
 Untersuchungen über die schädliche Einwirkung des Hütten- u. Steinkohlenrauches auf das Wachstum der Pflanzen, insbesondere der Fichte und Tanne. Tharander Forstl. Jahrb. 21: 218-254.
- Stoklasa, J. 1918. (3161)
 Über den Einfluss des Aluminumions auf die Keimung des Samens und die Entwicklung der Pflanzen. Biochem. Zeitschr. 91: 187-223.
- _____. 1922. (3162)
 Über die Verbreitung des Aluminums in der Natur und seine Bedeutung beim Bau- und Betriebsstoffwechsel der Pflanzen. Jena.
- _____. 1923. (3163)
 Die Beschädigungen der Vegetation durch Rauchgase und Fabrikexhalationen. Berlin.
- _____. and A. Ernest. 1905. (3164)
 Über den Ursprung, die Menge und die Bedeutung des Kohlendioxyds im Boden. Centbl. Bakt. 14: 723-736.
- Stone, G. E. 1903. (3165)
 Injuries to shade trees from electricity. Mass. (Hatch) Agr. Exp. Sta. Bull. 91, 1-21.
- _____. 1905. (3166)
 Some important literature relating to diseases, etc., of crops not generally believed to be caused by fungi or insects. Mass. (Hatch) Agr. Exp. Sta. Ann. Rept. 17, 31-34.
- _____. 1907. (3167)
 The relation of cultural conditions to plant diseases. U. S. Dept. Agr., Dept. Bull. 196, 110-112.
- _____. 1908. (3168)
 Sun scorch of pine. Mass. Agr. Exp. Sta. Ann. Rept. 20, 125-126.
- _____. 1908. (3169)
 Effects of gas, electricity, etc. on trees. Mass. Agr. Exp. Sta. Bull. 125, 37-48.
- _____. 1910. (3170)
 Malnutrition. Mass. Agr. Exp. Sta. Ann. Rept. 22 (1), 154-162.
- _____. 1910. (3171)
 Sun scorch of the pine. Mass. Agr. Exp. Sta. Ann. Rept. 22 (2), 65-69.
- _____. 1911. (3172)
 Shade tree troubles. Mass. Agr. Exp. Sta. Ann. Rept. 23 (2), 52-55.
- _____. 1911. (3173)
 Tomato diseases. Mass. Agr. Exp. Sta. Bull. 138, 1-32.
- _____. 1912. (3174)
 Frost cracks. Mass. Agr. Exp. Sta. Ann. Rept. 24 (1), 110-114.
- _____. 1913. (3175)
 Effects of illuminating gas on vegetation. Mass. Agr. Exp. Sta. Ann. Rept. 25 (1), 45-60.
- _____. 1913. (3176)
 Shade-tree troubles. Mass. Agr. Exp. Sta. Ann. Rept. 25 (1), 73-83.
- _____. 1914. (3177)
 Electrical injury to trees. Mass. Agr. Exp. Sta. Bull. 156, 1-19.
- _____. 1916. (3178)
 Shade trees, characteristics, adaptation, diseases and care. Mass. Agr. Exp. Sta. Bull. 170, 204-208, 220-228.
- _____. 1916. (3179)
 Injury to vegetation resulting from climatic conditions. Jour. N. Y. Bot. Gard. 17: 173-179.
- _____. and N. F. Monahan. 1906. (3180)
 Report of the botanist. Mass. Agr. Exp. Sta. Ann. Rept. 18, 115-148.
- _____. and R. E. Smith. 1897. (3181)
 Physiological disorders. Mass. (Hatch) Agr. Exp. Sta. Ann. Rept. 9, 81-84.
- _____. and _____. 1899. (3182)
 Some difficulties which city shade trees have to contend with. Mass. (Hatch) Agr. Exp. Sta. Ann. Rept. 11, 163-167.
- _____. and _____. 1899. (3183)
 The asparagus rust in Massachusetts. Mass. (Hatch) Agr. Exp. Sta. Bull. 61, 1-20.
- _____. and _____. 1900. (3184)
 The relationship existing between the asparagus rust and the physical properties of the soil. Mass. (Hatch) Agr. Exp. Sta. Ann. Rept. 12, 61-73.
- _____. and _____. 1900. (3185)
 The rotting of greenhouse lettuce. Mass. (Hatch) Agr. Exp. Sta. Bull. 69, 1-40.

- _____ and _____. 1902. (3186)
Report of the botanists. Mass. (Hatch) Agr. Exp. Sta. Ann. Rept. 14, 69-73.
- Stone, R. E. 1919. (3187)
Kerosene injury to shade trees. *Phytopath.* 9: 476-477.
- _____ et al. 1917. (3188)
Experiments on the cause and means of control of a peculiar disease of winter tomatoes. *Ont. Agr. Coll. and Exp. Farm Ann. Rept.* 43, 80.
- Störmer, K. 1909. (3189)
Über einige Beziehungen zwischen Witterungsverhältnissen und dem Auftreten von Pflanzenkrankheiten. *Landw. Wachenschr., Sachsen*, 11: 202-203, 210-212.
- _____. 1910. (3190)
Über einige im Jahre 1909 aufgetretene Pflanzenkrankheiten von besonderer Bedeutung. *Landw. Wachenschr., Sachsen*, 12: 19-21, 27-29.
- _____. 1910. (3191)
Die Krankheiten der Rüben im vergangenen Jahre. *Bl. Zuckerrubensbau* 17: 88-93.
- _____ and O. Morgenthaler. 1911. (3192)
Das Auftreten der Blattrollkrankheit der Kartoffeln in der Provinz Sachsen im Jahre 1910. *Naturw. Zeitschr. Forst. u. Landw.* 9: 521-551.
- Storp, F. 1883. (3193)
Über den Einfluss von Kochsalz- und Zinksulfathaltigem Wasser auf Boden und Pflanzen. *Landw. Jahrb.* 12: 795-837.
- Stoughton, R. H. 1928. (3194)
The influence of environmental conditions on the development of the angular leaf-spot disease of cotton. *Ann. Appl. Biol.* 15: 333-341.
- _____. 1930. (3195)
Angular leaf-spot disease of cotton. *Nature* 125: 350-351.
- _____. 1930. (3196)
The influence of environmental conditions on the development of the angular leaf-spot disease of cotton. II. The influence of soil temperature on primary and secondary infection of seedlings. *Ann. Appl. Biol.* 17: 493-503.
- Stoughton-Harris, R. H. 1926. (3197)
The influence of the reaction and the concentration of the medium on the growth of *Phytophthora faberi* in artificial culture. *Rubber Res. Scheme, Ceylon Quart. Circ.* 3, 5-6.
- Stout, G. L. 1930. (3198)
Severe hail injury to trees and shrubs. *Science* 71: 187-188.
- Stover, W. G. 1922. (3199)
The relation of soil temperature to the development of the seedling blight of corn caused by *Helminthosporium* sp. *Phytopath.* 12: 30. (Abst.).
- Straib, W. 1927. (3200)
Untersuchungen über die Ursache verschiedener Sortenanfälligkeit des Weizens gegen Steinbrand. *Pflanzenbau* 4: 129-136.
- _____. 1928. (3201)
Versuche mit Düngemitteln zur Steinbrandbekämpfung des Weizens. *Fortschr. Landw.* 3: 110-114.
- Stranák, F. 1911. (3202)
Über die mechanische Bestimmung des Widerstandes der Getreidesorten gegen Pflanzenkrankheiten und Pflanzenschädlinge. *Deutsche Landw. Presse* 38: 209-210.
- _____. 1915. (3203)
Zur Frage der Bekämpfung des Gelbrostes. *Deutsche Landw. Presse* 42: 379.
- Strong, F. C. 1928. (3204)
Fungous diseases attack trees in wet seasons. *Mich. Agr. Exp. Sta. Quart. Bull.* 11: 13-17.
- Stuart, W. 1905. (3205)
On the winter injury of apple trees. *Vt. Agr. Exp. Sta. Ann. Rept.*, 1904-1905, 299-300.
- _____. 1906. (3206)
Disease resistance of potatoes. *Vt. Agr. Exp. Sta. Bull.* 122, 105-136.
- Stucky, H. P. 1915. (3207)
Tomatoes. *Ga. Agr. Exp. Sta. Bull.* 112, 211-248.
- _____ and J. C. Temple. 1911. (3208)
Blossom-end rot of tomatoes. *Ga. Agr. Exp. Sta. Bull.* 96, 69-91.
- Studhalter, R. A. and F. D. Heald. 1915. (3209)
The persistence of viable pyrenospores of the chestnut blight fungus on normal bark below lesions. *Amer. Jour. Bot.* 2: 162-168.

- Sturgis, W. C. 1895. (3210)
Notes on injuries due to physiological causes. Conn. Agr. Exp. Sta. Ann. Rept. 19, 189-190.
- _____. 1896. (3211)
On a leaf-blight of melons. Conn. Agr. Exp. Sta. Ann. Rept. 20, 267-268.
- _____. 1896. (3212)
Notes on the so-called "shelling" of grapes. Conn. Agr. Exp. Sta. Ann. Rept. 20, 278-281.
- _____. 1898. (3213)
On the prevention of leaf-blight and leaf-spot of celery. Conn. Agr. Exp. Sta. Ann. Rept., 1897, 169-171.
- _____. 1898. (3214)
Preliminary notes on two diseases of tobacco. Conn. Agr. Exp. Sta. Ann. Rept. 22, 242-260.
- _____. 1898. (3215)
On some aspects of vegetable pathology and the conditions which influence the dissemination of plant diseases. Bot. Gaz. 25: 187-194.
- _____. 1899. (3216)
On the effects, on tobacco, of shading and the application of lime. Conn. Agr. Exp. Sta. Ann. Rept. 23, 252-261.
- _____. 1900. (3217)
Peach-foliage and fungicides. Conn. Agr. Exp. Sta. Ann. Rept. 24, 219-254.
- Stutzer, A. 1917. (3218)
Beziehung zwischen der Reaktion des Bodens, dem Auftreten von Pflanzenkrankheiten und der Entwicklung gewisser Pflanzen. Fuhling's Landw. Zeit. 66: 130-132.
- _____. 1922. (3219)
Die Bedeutung des Kalks als Schutzmittel gegen Parasiten und gegen Erreger von nicht-parasitären Pflanzenkrankheiten. Deut. Obstbauz. 68: 206-207.
- Sueda, H. 1929. (3220)
Studies on the rice blast disease. Jap. Jour. Bot. 4: 73. (Abst.).
- Summers, F. 1923. (3221)
The physiology of leaf scorch. Agr. and Hort. Res. Sta., Long Ashton, Bristol, Ann. Rept., 1922, 77-83.
- _____. 1923. (3222)
The physiology of leaf scorch. Jour. Bath and W. and S. Counties Soc. 17: 123-132.
- Sundaraman, S. 1929. (3223)
Administration report of the government mycologist, Coimbatore, for 1928-29. Rept. Dept. Agr., Madras Presidency, 1928-1929, 1-27.
- Surr, G. J. and L. D. Batchelor. 1926. (3224)
Citrus culture in central California. Calif. Agr. Exp. Sta. Bull. 405, 1-23.
- Suzuki, H. 1930. (3225)
Experimental studies on the possibility of primary infection of *Piricularia oryzae* and *Ophiobolus miyabeanus* internal on rice seeds. Ann. Phytopath. Soc. Japan 2: 245-275.
- Swain, R. E. and W. D. Harkins. 1908. (3226)
Arsenic in vegetation exposed to smelter smoke. Jour. Amer. Chem. Soc. 30: 915-928.
- Swanback, T. R. 1927. (3227)
The effect of boric acid on the growth of tobacco plants in nutrient solutions. Plant Physiol. 2: 475-486.
- Swingle, D. B. and H. E. Morris. 1911. (3228)
A preliminary report on the effects of arsenical compounds upon apple trees. Phytopath. 1: 79-93.
- _____. and _____. 1917. (3229)
Arsenical injury through the bark of fruit trees. Jour. Agr. Res. 8: 283-318.
- _____. and _____. 1921. (3230)
The brown bark spot of fruit trees. Mont. Agr. Exp. Sta. Bull. 146, 1-22.
- _____. _____, and E. Burke. 1923. (3231)
Injury to foliage by arsenical spray mixtures. Jour. Agr. Res. 24: 501-537.
- Swingle, H. S. 1929. (3232)
Composition of commercial acid lead arsenate and its relation to arsenical injury. Jour. Agr. Res. 39: 393-401.
- Swingle, W. T. 1895. (3233)
The grain smuts: their causes and prevention. U. S. Dept. Agr. Yrbk., 1894, 409-420.

- _____, T. R. Robinson, and E. May. 1928. (3234)
Experiments on boron tolerance of citrus plants and their wild relatives. Amer. Jour. Bot. 15: 616-617. (Abst.).
- _____, and H. F. Weber. 1896. (3235)
The principal diseases of citrus fruits in Florida. U. S. Dept. Agr., Div. Veg. Physiol. and Path. Bull. 8, 1-40.
- Sylvén, N. 1918. (3236)
Års knockesjuka norra Västergötland. Meddel. Stat. Skogsförsöksanst. 15: 192-204.
- Taboureaux, L. 1917. (3237)
Sur le traitement du mildiou. Prog. Agr. et Vitic. 67: 255-258.
- Tacke, B. and T. Arnd. 1928. (3238)
Die schädliche Bodenazidität und ihre Bestimmung. Zeitschr. Pflanzenernähr. u. Düng., Abt. A, 12: 362-390.
- Taft, L. R. 1898. (3239)
Spraying calendar for 1898. Mich. Agr. Exp. Sta. Bull. 155, 291-307.
- _____, and G. C. Davis. 1895. (3240)
The pests of the orchard and garden. Mich. Agr. Exp. Sta. Bull. 121, 1-80.
- Takahashi, T. 1927. (3241)
A Sclerotium disease of larkspur. Phytopath. 17: 239-245.
- Takeuchi, H. 1929. (3242)
Penicillium rots of citrus fruits. Bull. Sci. Fakultato Terkultura, Kjusu Imp. Univ., 3: 333-349.
- Takimoto, K. 1920. (3243)
On a bacterial leaf-spot of Antirrhinum majus L. (Japanese). Bot. Mag. (Tokyo) 34: 253-257.
- Tarr, L. W. and S. C. Noble. 1922. (3244)
The effect of hydrogen-ion concentration upon the growth of seedlings. Del. Agr. Exp. Sta. Bull. 131, 1-52.
- Taslim, M. 1928. (3245)
Stem-rot of Berseem caused by Rhizoctonia solani Kühn. Agr. Res. Inst., Pusa, Bull. 180, 1-8.
- Taubenhaus, J. J. 1916. (3246)
Soilstain, or scurf, of the sweet potato. Jour. Agr. Res. 5: 995-1001.
- _____. 1919. (3247)
Recent studies on Sclerotium rolfsii Sacc. Jour. Agr. Res. 18: 127-138.
- _____. 1926. (3248)
Plant pathology and physiology. Texas Agr. Exp. Sta. Ann. Rept. 39, 45-85.
- _____. 1926. (3250)
Studies of a new Fusarium wilt of spinach in Texas. Texas Agr. Exp. Sta. Bull. 343, 1-23.
- _____, et al. 1925. (3251)
Plant pathology and physiology. Texas Agr. Exp. Sta. Ann. Rept. 38, 32-34.
- _____, et al. 1927. (3252)
Plant pathology and physiology. Texas Agr. Exp. Sta. Ann. Rept. 40, 59-63.
- _____, and B. F. Dana. 1928. (3253)
The influence of moisture and temperature on cotton root rot. Texas Agr. Exp. Sta. Bull. 386, 1-23.
- _____, W. N. Ezekiel, and D. T. Killough. 1928. (3254)
Relation of cotton root rot and Fusarium wilt to the acidity and alkalinity of the soil. Texas Agr. Exp. Sta. Bull. 389, 1-19.
- _____, and _____. 1930. (3255)
Recent studies on Phymatotrichum root-rot. Amer. Jour. Bot. 17: 554-571.
- _____, and F. W. Mally. 1921. (3256)
Pink root disease of onions and its control in Texas. Texas Agr. Exp. Sta. Bull. 273, 1-42.
- Taylor, A. D. 1908. (3257)
Street trees, their care and preservation. N. Y. (Cornell) Agr. Exp. Sta. Bull. 256, 305-345.
- Taylor, E. P. and G. J. Downing. 1917. (3258)
Experiments in the irrigation of apple orchards. Idaho Agr. Exp. Sta. Bull. 99, 1-48.
- Taylor, M. W. 1917. (3259)
Preliminary report on the vertical distribution of Fusarium in soil. Phytopath. 7: 374-378.

- Taylor, N. 1916. (3260)
What the winter of 1916 did to the Garden evergreen collection. Brooklyn Bot. Gard
Rec. 5: 140-142.
_____. 1918. (3261)
Effects of the severe winter on the woody plants in the Garden. Brooklyn Bot. Gard
Rec. 7: 83-87.
_____. 1920. (3262)
Effects of winter of 1919-1920 on the woody plants in the Garden. Brooklyn Bot. Gard.
Rec. 9: 121-123.
_____. 1925. (3264)
Some outstanding features of the plant disease situation in Illinois during 1923. Trans.
Ill. Acad. Sci. 17: 88-93.
_____. 1926. (3265)
The field survey as a basis for the phenological interpretation of the plant disease
epidemic. Phytopath. 16: 63. (Abst.).
_____. 1926. (3266)
The plant disease situation in Illinois during 1925. Trans. Ill. Acad. Sci. 19: 144-150.
_____. 1927. (3267)
Epidemic diseases of grain crops in Illinois, 1922-1926. Ill. Nat. Hist. Survey Bull. 17,
1-96.
_____. and P. A. Young. 1924. (3268)
Notes on the climatic conditions influencing the 1923 epidemic of stem rust on wheat in
Illinois. Phytopath. 14: 94-100.
Temple, C. E. 1918. (3269)
Report of the state plant pathologist. Rept. Md. Agr. Soc. 2: 161-169.
Temple, W. 1927. (3270)
Die Kräuselkrankheit des Pflsichs (*Exoascus deformans* Berk.) und ihre Bekämpfung.
Die Kranke Pflanze 4: 91-95.
_____. 1929. (3271)
Flusssäureschäden an Kirschfrüchten. Die Kranke Pflanze 6: 213-214.
Teng, S. C. 1929. (3272)
Rhizoctonosis of lobelia. Phytopath. 19: 585-588.
Teodoro, N. G. 1923. (3273)
A study of a *Macrosporium* disease of onions. Philippine Agr. Rev. 16: 233-273.
_____. and J. R. Bogayong. 1926. (3274)
Rice diseases and their control. Philippine Agr. Rev. 19: 237-241.
Terényi, A. 1927. (3275)
Die Wirkung des Wassers und Bodens bei der Kupfervitriolbeize des Weizens. Fortschr.
Landw. 2: 517-519.
Teterevnikova-Babayan, D. N. 1930. (3276)
The problem of the causation of scorch injury by fungicides. (Trans. title). Morb.
Plantarum, Leningrad, 19: 97-122.
Thayer, P. 1916. (3277)
Winterkilling of peach buds. Ohio Agr. Exp. Sta. Mo. Bull. 1 (10): 311-312.
Thiele, R. 1896. (3278)
Temperaturgrenzen der Schimmelpilze. Diss. Leipzig. 37 pp.
Thillard, R. 1921. (3279)
La culture de tabac de Sumatra au Cameroun. L'Agronomie Coloniale 6: 185-194,
227-229.
Thomas, H. E. 1921. (3280)
The relation of the health of the host and other factors to infection of *Apium graveolens*
by *Septoria apii*. Bull. Torrey Bot. Club 48: 1-29.
_____. 1925. (3281)
Root and crown rot of apple. Proc. N. Y. State Hort. Soc. 70: 171.
_____. 1926. (3282)
Root and crown injury of apple trees. N. Y. (Cornell) Agr. Exp. Sta. Bull. 488, 1-9.
_____. and A. B. Burrell. 1929. (3283)
A twig canker of apple caused by *Nectoria cinnabarina*. Phytopath. 19: 1125-1128.
_____. and A. S. Muller. 1929. (3284)
Some factors which influence the infection of *Apium graveolens* L. by *Septoria apii*
Rostr. Amer. Jour. Bot. 16: 789-798.
Thomas, R. C. 1922. (3285)
A bacterial rosette disease of lettuce. Ohio Agr. Exp. Sta. Bull. 359, 197-214.

- Thomas, R. P. et al. 1929. (3286)
Fertilizers lessen injury from tobacco brown root rot. Wis. Agr. Exp. Sta. Bull. 405, 111-112.
- Thompson, A. 1926. (3287)
A disease of the Betel vine caused by a species of *Phytophthora*. Malayan Agr. Jour. 14: 1-6.
- Thompson, H. C. 1923. (3288)
Factors influencing early development of seed stalk of celery. Proc. Amer. Soc. Hort. Sci. 20: 219-224.
- Thompson, R. C. 1926. (3289)
Tipburn of lettuce. Colo. Agr. Exp. Sta. Bull. 311, 1-31.
- Thorne, C. E. 1907. (3290)
Yellow leaf in oats. Ohio Agr. Exp. Sta. Press Bull. 286.
- Tiedjens, V. A. 1925. (3291)
Yellow pickle in greenhouse cucumbers. Mass. Agr. Exp. Sta. Bull. 225, 1-8.
- Tiemann, A. 1926. (3292)
Untersuchungen über die Empfanglichkeit des Sommerweizens für *Ustilago tritici* und den Einfluss der äusseren Bedingungen dieser Krankheit. Fortschr. Landw. 1: 292-293. (Abst.).
- Tilford, P. E. 1926. (3293)
Potato leaf roll in Ohio. Ohio Agr. Exp. Sta. Bimo. Bull. 11 (2), 55-59.
- . 1930. (3294)
A *Rhizoctonia* disease of sweet alyssum. Phytopath. 20: 587-590.
- Tiller, L. W. 1929. (3295)
Cold storage of fruit. Investigations conducted with apples during 1927-1928. New Zealand Dept. Sci. and Indus. Res. Bull. 16, 1-23.
- Tims, E. C. 1926. (3296)
On the nature of resistance to cabbage yellows. Jour. Agr. Res. 32: 183-199.
- . 1926. (3297)
The influence of soil temperature and soil moisture on the development of yellows in cabbage seedlings. Jour. Agr. Res. 33: 971-992.
- and J. C. Walker. 1924. (3298)
A *Fusarium* bulb rot of onion. Phytopath. 14: 26-27. (Abst.).
- Tinker, M. A. H. 1925. (3299)
The effect of length of day upon the growth and reproduction of some economic plants. Ann. Bot. 39: 721-754.
- Tiraboschi, C. 1909. (3300)
Attenuazione del potere germinativo delle spore di *Penicillium glaucum* mantenute a 37° C. Centbl. Bakt. 22: 463. (Abst.).
- Tischler, G. 1911. (3301)
Untersuchungen über die Beeinflussung der *Euphorbia cyparissias* durch *Uromyces pisi*. Flora 104: 1-64.
- Tisdale, W. B. 1920. (3302)
The relation of soil temperature and soil moisture to the occurrence of cabbage yellows. Phytopath. 10: 63. (Abst.).
- . 1920. (3303)
Iris leaf spot caused by *Didymellina iridis*. Phytopath. 10: 148-163.
- . 1923. (3304)
Report of the Tobacco Experiment Station. Fla. Agr. Exp. Sta. Ann. Rept., 125-140.
- . 1923. (3305)
Influence of soil temperature and soil moisture upon the *Fusarium* disease in cabbage seedlings. Jour. Agr. Res. 24: 55-86.
- . 1924. (3306)
Report of the Tobacco Experiment Station. Fla. Agr. Exp. Sta. Ann. Rept., 121-129.
- . 1929. (3307)
Plant pathology. Fla. Agr. Exp. Sta. Ann. Rept., 68-81.
- and J. G. Kelley. 1926. (3308)
A *Phytophthora* disease of tobacco. Fla. Agr. Exp. Sta. Bull. 179, 159-219.
- and ———. 1926. (3309)
Stem injury of tobacco. Fla. Agr. Exp. Sta. Bull. 182, 279-286.
- and M. M. Williamson. 1923. (3310)
Bacterial spot of lima bean. Jour. Agr. Res. 25: 141-153.

- Tisdale, W. H. 1916. (3311)
A Melanconium parasitic on the tomato. Phytopath. 6: 390-394.
- _____. 1916. (3312)
 Relation of soil temperature to infection of flax by *Fusarium lini*. *Phytopath. 6: 412-413.*
- _____. 1917. (3313)
 Relation of temperature to the growth and infecting power of *Fusarium lini*. *Phytopath. 7: 356-360.*
- _____. 1919. (3314)
 The Physoderma disease of corn. *Phytopath. 9: 51-52. (Abst.).*
- _____. 1919. (3315)
 Physoderma disease of corn. *Jour. Agr. Res. 16: 137-154.*
- _____. 1920. (3316)
 The brown-spot of corn with suggestions for its control. *U. S. Dept. Agr., Farmers' Bull. 1124, 1-9.*
- _____. and J. M. Jenkins. 1921. (3317)
 Straighthead of rice and its control. *U. S. Dept. Agr., Farmers' Bull. 1212, 1-16.*
- _____. and C. O. Johnston. 1926. (3318)
 A study of smut resistance in corn seedlings grown in the greenhouse. *Jour. Agr. Res. 32: 649-668.*
- _____. C. E. Leighty, and E. G. Boerner. 1927. (3319)
 A study of the distribution of *Tilletia tritici* and *T. laevis* in 1926. *Phytopath. 17: 167-174.*
- Tits, D. 1922. (3320)
 Les excitants de la germination d'un champignon: *Phycomyces nitens*. *Bull. Cl. Sci. Acad. Roy. Belg. 8: 219-227.*
- Tochinai, Y. 1921. (3321)
 Studies on the physiology of *Fusarium lini*. *Trans. Sapporo Nat. Hist. Soc. 8: 19-44.*
- _____. 1925. (3322)
 Comparative studies on the physiology of *Fusarium lini* and *Colletotrichum lini*. *Jour. Coll. Agr., Hokkaido Imp. Univ. 14: 171-236.*
- _____. and S. Enomoto. 1924. (3323)
 On the dry heat sterilization of flax seeds for the prevention of its anthracnose. *Jour. Soc. Agr. and For. Japan 15 (66): 225-234.*
- Togashi, K. 1928. (3324)
 On the development of two races of *Valsa* in relation to the hydrogen-ion concentration of peach trees. (Japanese). *Agr. and Hort. 3: 893-902.*
- _____. 1929. (3325)
 Studies on the *Valsa* diseases of fruit and forest trees. *Ann. Rept. Saito Ho-on Kai Japan 4: 88-90.*
- _____. 1930. (3326)
 Comparative studies on the physiology of *Leucostoma leucostoma* and *Valsa japonica*. *Bull. Imp. Coll. Agr. and For. Japan. 15: 1-76.*
- Tomkins, R. G. 1928. (3327)
 The water relationships of fruit-rotting fungi. *Dept. Sci. Ind. Res., Food Invest. Bd. Rept., Great Britain, 1927, 36-38.*
- _____. 1929. (3328)
 Studies of the growth of moulds. I. *Proc. Roy. Soc., London, 105B: 375-401.*
- Tompkins, C. M. 1925. (3329)
 Effect of intermittent temperatures on potato mosaic. *Phytopath. 15: 46. (Abst.).*
- _____. 1926. (3330)
 Influence of the environment on potato mosaic symptoms. *Phytopath. 16: 581-609.*
- Toro, R. A. 1925. (3331)
 La influencia del ambiente en la protección de las plantas contra enfermedades. *Porto Rico Insul. Exp. Sta. Circ. 90, 1-10.*
- Tottingham, W. E. and A. J. Beck. 1916. (3332)
 Antagonism between manganese and iron in the growth of wheat. *Plant World 19: 359-370.*
- Toumey, J. W. 1898. (3333)
 Sun-burn. *Ariz. Agr. Exp. Sta. Ann. Rept. 9, 163-165.*
- _____. 1921. (3334)
 Damage to forests and other vegetation by smoke, ash and fumes from manufacturing plants in Naugatuck Valley, Connecticut. *Jour. Forestry 19: 367-373.*

- Townsend, C. O. 1901. (3335)
Notes on celery blight. Md. Agr. Exp. Sta. Bull. 74, 167-182.
- _____. 1904. (3336)
A soft rot of the calla lily. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 60, 1-44.
- _____. 1914. (3337)
Leaf spot, a disease of the sugar beet. U. S. Dept. Agr., Farmers' Bull. 618, 1-18.
- Traaen, A. E. 1914. (3338)
Untersuchungen über Bodenpilze aus Norwegen. Nyt. Mag. Naturvidensk. 52: 19-121.
- _____. 1925. (3339)
Über den Einfluss der Temperatur und der Feuchtigkeit auf den Brandbefall des Hafers durch gedeckten Haferbrand, (*Ustilago laevis* (K and S) Mag.). Meld. Norges Landbr. Hiskale 3: 157-168.
- Trappman, W. 1927. (3340)
Schädlingsbekämpfung. Leipzig.
- Treboux, O. 1903. (3341)
Einige stoffliche Einflüsse auf die Kohlensäureassimilation bei submersen Pflanzen. Flora 92: 49-76.
- Tréfauld, B. 1928. (3342)
Les blés et les gelées de Décembre 1927. Jour. Agr. Prat. 50: 29-30.
- Trelease, S. F. and H. M. Trelease. 1928. (3343)
Susceptibility of wheat to mildew as influenced by salt nutrition. Bull. Torrey Bot. Club 55: 41-68.
- Trénel, M. 1925. (3344)
Kennst du deinen Boden, Landwirt seine Krankheiten und Schwächen? Illus. Landw. Zeit. 45: 633-635.
- Tropova, A. T. 1929. (3345)
The active acidity of the cell sap of some plants and their susceptibility to fungous and bacterial infection. Jour. Agr. Res. No. Caucasus 13: 3-16.
- Troude. 1897. (3346)
Die Gelbfärbung der Zuckerrüben. Zeitschr. Pflanzenkr. 7: 55. (Abst.).
- True, R. H. and C. S. Oglevee. 1905. (3347)
The effect of the presence of insoluble substances on the toxic action of poisons. Bot. Gaz. 39: 1-21.
- Truog, E. 1918. (3348)
Soil acidity: 1. Its relation to the growth of plants. Soil Sci. 5: 169-195.
- Tryon, H. 1928. (3349)
Pineapple disease investigations. Interim report. Queensland Agr. Jour. 30: 26-34.
- Tu, C. 1929. (3350)
Physiologic specialization in *Fusarium* spp. causing headblight of small grains. Phytopath. 19: 143-154.
- Tubeuf, C. von. 1901. (3351)
Einige Beobachtungen über die Verbreitung parasitärer Pilze durch den Wind. Arb. K. Biol. Land- u. Forstw. 2: 175-177.
- _____. 1902. (3352)
Studien über die Brandkrankheiten des Getreides und ihre Bekämpfung. Arb. K. Biol. Land- u. Forstw. 2: 179-349.
- _____. 1903. (3353)
Die Gipfeldürre der Fichten. Naturw. Zeitschr. Land- u. Forstw. 1: 1-9.
- _____. 1904. (3354)
Frostwirkung auf Laubblätter. Naturw. Zeitschr. Land- u. Forstw. 2: 293-295.
- _____. 1918. (3355)
Absterben der Gipfeltriebe an Fichten. Naturw. Zeitschr. Forst- u. Landw. 11: 396-399.
- _____. 1914. (3356)
Hitzetot und Einschnürungskrankheiten der Pflanzen. Naturw. Zeitschr. Forst- u. Landw. 12: 19-36.
- _____. 1914. (3357)
Erkrankungen durch Luftabschluss und Überhitzung. Naturw. Zeitschr. Forst- u. Landw. 12: 67-88, 161-169.
- _____. 1930. (3358)
Gnomonia pseudoplatani n. sp., die Ursache der Riesenflecken auf den Blättern des Bergahorns (*Acer pseudoplatanus*). Zeitschr. Pflanzenkr. u. Pflanzenschutz 40: 364-375.
- Tucker, C. M. 1926. (3359)
A leaf, bract, and boll spot of sea-island cotton caused by *Helminthosporium gossypii* (n. sp.). Jour. Agr. Res. 32: 391-395.

- _____. 1926. (3360)
Phytophthora bud rot of coconut palms in Porto Rico. Jour. Agr. Res. 32: 471-498.
- _____. 1929. (3361)
Report of the plant pathologist. Porto Rico Agr. Exp. Sta. Ann. Rept., 1928, 29-35.
- Tullis, E. C. 1930. (3362)
Stem rot of rice. Ark. Agr. Exp. Sta. Ann. Rept. 42, Bull. 257, 72-73.
- Tunstall, A. C. 1928. (3363)
The influence of manuring on susceptibility of tea leaves to brown blight (*Glomerella cingulata*) at Borbhetta. Quart. Jour. Indian Tea Assoc., 1927, 183-186.
- _____. 1929. (3364)
Vegetable parasites of the Tea plant (continued). Blights on the root. Quart. Jour. Indian Tea Assoc., 68-75.
- Turner, J. A. 1928. (3365)
Relation of distribution of certain Compositae to the hydrogen-ion concentration of the soil. Bull. Torrey Bot. Club 55: 199-213.
- Underwood, L. M. 1891. (3366)
Diseases of the orange in Florida. Jour. Mycol. 7: 27-36.
- Uppal, B. N. 1926. (3367)
Relation of oxygen to spore germination in some species of the Peronosporales. Phytopath. 16: 285-292.
- _____. 1928. (3368)
Control of the red rot of sugarcane. Bombay Dept. Agr. Leaflet 7, 3 pp.
- Valleau, W. D. and E. M. Johnson. 1926. (3369)
The relation of nitrate to tobacco frencing. Science 64: 278-279.
- _____. and _____. 1927. (3370)
Tobacco frencing—A nitrogen deficiency disease. Ky. Agr. Exp. Sta. Bull. 281, 175-253.
- Van Everdingen, E. 1926. (3371)
Het verband tusschen de weergesteldheid en de Aardappelziekte (*Phytophthora infestans*). Tijdschr. Plantenziekten 32: 129-140.
- Van Hook, J. M. 1904. (3372)
Diseases of ginseng. N. Y. (Cornell) Agr. Exp. Sta. Bull. 219, 163-186.
- _____. 1907. (3373)
Celery root-rot. Ohio Agr. Exp. Sta. Circ. 72, 1-6.
- Van der Meer, J. H. H. 1926. (3374)
Rhizoctonia—en Olpidium—aantasting van Bloemkoolplanten. Tijdschr. Plantenziekten 32: 209-242.
- _____. 1929. (3375)
Invloed van den vochtigheidstoestand van den grond op de slimziekte, veroorzaakt door *Bacterium solanacearum*. Bull. Deli Proefstat. te Medan-Sumatra 29: 1-55.
- Van Poeteren, N. 1929. (3376)
Verslag over de werkzaamheden van den Plantenziektenkundigen Dienst in het jaar 1928. Versl. Meded. Plantenziek. Dienst, Wageningen, 58: 1-99.
- Van Slogteren, E. 1927. (3377)
De bestrijding van het geelziek der Hyacinthen. Weekbl. Bloembollencult. 38: 175-179.
- _____. and K. S. Thomas. 1930. (3378)
Smeul, een Tulpenziekte, veroorzaakt door een schimmel, *Sclerotium perniciusum* nov. spec. Weekbl. Bloembollencult. 41: 1-12.
- Van der Waal, G. A. 1929. (3379)
Het blauw worden der Aardappelen. Tijdschr. Plantenziekten 35: 60-68.
- Vanterpool, T. C. 1926. (3380)
Streak or winter blight of tomato in Quebec. Phytopath. 16: 311-331.
- Vavilov, N. I. 1918. (3381)
Immunity of plants to infectious diseases. Moscow.
- _____. 1919. (3382)
Immunity of plants to infectious diseases. (Russian). Bull. Petrovski Agr. Acad., 1918, 1-239.
- Veitch, F. P. 1906. (3383)
Plant growth as influenced by soil acidity. U. S. Dept. Agr., Bur. Chem. Bull. 99, 118-122.
- Venable, W. H. 1917. (3384)
The gnarly apple disease of 1914. Vt. Agr. Exp. Sta. Bull. 203, 12-13.

- Verwoerd, L. 1929. (3385)
The biology, parasitism and control of *Urocystis tritici* Koern., the causal organism of flag smut in wheat (*Triticum* spp.) and recording the occurrence of *Urocystis occulta* (Wallr.) Rab., in South Africa as the cause of "stem smut" in rye. (Trans. title). So. Afr. Dept. Agr., Sci. Bull. 76, 1-52.
- Viala, P. 1887. (3386)
Les maladies de la vigne. Paris.
- . 1893. (3387)
Les maladies de la vigne. Montpellier.
- . 1894. (3388)
De l'action de certaines substances toxiques sur la vigne. 1895. Rev. Vitic. 1: 61-64, 111-114.
- . 1926. (3389)
Recherches sur les maladies de la vigne: Esca. Ann. Epiphyties 12: 1-108.
- . 1929. (3390)
Le rôle de l'acide phosphorique dans les maladies de carence. Rev. Vitic. 71: 325-326.
- and P. Pacottet. 1904. (3391)
Sur le développement du Black Rot. Compt. Rend. Acad. Sci. (Paris) 139: 152-154.
- Vibar, T. 1926. (3392)
The relation of temperature and moisture to diseased and disease-free corn. Philippine Jour. Sci. 31: 169-213.
- Vidal, J. L. 1929. (3393)
La chlorose au pays de la craie. Prog. Agr. et Vitic. 91: 163-166.
- Villa, F. 1929. (3394)
Effect on young rice plants of adding aluminum salts to complete culture solutions. Philippine Agr. 17: 607-625.
- Vilmorin, H. L. 1893. (3395)
Étude sur la rouille du froment. Bull. Soc. Agr. France 34: 289-300.
- Vilmorin, J. de. 1922. (3396)
Résultats de quelques expériences de blés en 1921. Compt. Rend. Acad. Agr. France 8: 311-312.
- Virtanen, A. I. 1928. (3397)
Über die Einwirkung der Bodenazidität auf das Wachstum und die Zusammensetzung der Legumensepflanzen. Biochem. Zeitschr. 193: 300-312.
- Vladimirovskaya, N. N. 1928. (3398)
Contribution to the biology of *Epichloe typhina* Tul. (Russian). La Défense des Plantes, Leningrad, 5: 335-347.
- Voelcker, A. 1865. (3399)
On some causes of unproductiveness in soils. Jour. Roy. Agr. Soc. Eng., 2nd Ser., 1: 113-130.
- Voelcker, J. A. 1903. (3400)
The influence of manganese salts on wheat and barley. Jour. Roy. Agr. Soc. Eng. 64: 348-351.
- . 1912. (3401)
The Woburn pot-culture experiments 1910-11-12. Jour. Roy. Agr. Soc. Eng. 73: 314-338.
- . 1915. (3402)
The influence of boron compounds on wheat and barley. Jour. Roy. Agr. Soc. Eng. 76: 347-351.
- Voges, E. 1912. (3403)
Über Hagelschlagwunden an Obstgewächsen. Zeitschr. Pflanzenkr. 22: 457-462.
- . 1913. (3404)
Die Witterung und die Fusskrankheit des Getreides. Deutsche Landw. Presse 40: 993-994.
- Vogolino, P. I. 1905. (3404a)
Contribuzione alla studio della *Phyllactinia corylea*. Nuovo Giorn. Bot. Ital. 12: 313.
- Vogolino, R. 1922. (3405)
Servizio di segnalazione degli attacchi di *Plasmopara viticola* nel 1921 nelle Province di Torino, Cuneo, Novara. Nuovi Ann. Min. Agr. 2: 72-80.
- Volck, W. H. 1903. (3406)
Spraying with distillates. Calif. Agr. Exp. Sta. Bull. 153, 1-31.
- . 1911. (3407)
Injury caused by apple powdery mildew. Better Fruit 5: (2) 39-46, 59-61; (9) 60-69.

- Volkart, A. 1906. (3408)
Die Bekämpfung des Steinbrandes des Weizens und des Kornes. Landw. Jahrb. Schweiz.
20: 445-490.
- Vowinckel, O. 1927. (3409)
Die Anfälligkeit deutscher Kartoffelsorten gegenüber *Phytophthora infestans* (Mont.) De
By., unter besonderer Berücksichtigung der Untersuchungsmethoden. Arb. Biol. Reich-
sanst Land- u. Forstw. 14: 588-611.
- Vries, H. de. 1894. (3409a)
Over de erfelijkheid der fasciatien. Bot. Jahrb. 6: 72-118.
- Vuillemin, P. 1902. (3410)
Recherches sur les Mucorinées saccharifiantes (*Amylomyces*). Rev. Mycol. 24: 45-60.
- Wagner, M. 1907. (3411)
Pflanzenphysiologische Studien im Walde. Berlin. 177 pp.
- Waite, M. B. 1905. (3412)
Fruit trees frozen in 1904. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 51, 15-19.
- . 1910. (3413)
Peach yellows and frost injury. Science 31: 798-799.
- . 1931. (3414)
Weather's influence on plant diseases important and frequently dominant. U. S. Dept.
Agr. Yrbk., 1930, 534-541.
- Wakabayashi, S. 1925. (3415)
The injurious effect of submergence on the cranberry plant. N. J. Agr. Exp. Sta. Bull.
420, 1-26.
- Waksman, S. A. 1922. (3416)
Influence of soil reaction upon the growth of *Actinomycetes* causing potato scab. Soil
Sci. 14: 61-79.
- . 1924. (3417)
Influence of soil reaction upon the distribution of filamentous fungi in the soil. Ecology
5: 54-59.
- Waldron, M. 1923. (3418)
Effect of lightning on citrus. Proc. Fla. State Hort. Soc. 36: 168-170.
- Waldron, R. A. 1914. (3419)
Physiological studies on chestnut blight disease. Pa. Agr. Exp. Sta. Ann. Rept.,
1912-13 (2), 152-156.
- Walker, J. C. 1919. (3420)
Onion diseases and their control. U. S. Dept. Agr., Farmers' Bull. 1060, 1-23.
- . 1921. (3421)
Onion smudge. Jour. Agr. Res. 20: 685-721.
- . 1922. (3422)
Seed treatment and rainfall in relation to the control of cabbage black-leg. U. S. Dept.
Agr., Dept. Bull. 1029, 1-27.
- . 1924. (3423)
On the nature of disease resistance in plants. Trans. Wis. Acad. Sci. 21: 225-247.
- . 1924. (3424)
White rot of *Allium* in Europe and America. Phytopath. 14: 315-322.
- . 1926. (3425)
The influence of soil temperature and soil moisture upon white rot of *Allium*. Phytopath.
16: 697-709.
- . 1926. (3426)
Botrytis neck rots of onions. Jour. Agr. Res. 33: 893-928.
- . 1927. (3427)
Diseases of cabbage and related plants. U. S. Dept. Agr., Farmers' Bull. 1439, 1-30.
- . 1929. (3428)
Some remarks on the physiological aspects of parasitism. Proc. Intern. Cong. Plant Sci-
ences, Ithaca, 1926, 1263-1270.
- . 1930. (3429)
The nature of yellows resistance in cabbage. Phytopath. 20: 114-115. (Abst.).
- and L. R. Jones. 1921. (3430)
The relation of soil temperature and other factors to onion smut and infection. Phyto-
path. 11: 52-53. (Abst.).
- and L. R. Jones. 1921. (3431)
Relation of soil temperature and other factors to onion smut infection. Jour. Agr. Res.
22: 235-261.

- _____, K. P. Link, and H. R. Angell. 1929. (3432)
Chemical aspects of disease resistance in the onion. *Proc. Nat'l Acad. Sci.* 15: 845-850.
- _____, and R. Smith. 1930. (3433)
Effect of environmental factors upon the resistance of cabbage to yellows. *Jour. Agr. Res.* 41: 1-15.
- _____, and E. C. Tims. 1924. (3434)
A *Fusarium* bulb rot of onion and the relation of environment to its development. *Jour. Agr. Res.* 28: 683-694.
- _____, and W. B. Tisdale. 1922. (3435)
Further notes on the occurrence of cabbage black leg. *Phytopath.* 12: 43. (Abst.).
- _____, and F. L. Wellman. 1924. (3436)
Temperature relations of *Urocystis cepulae* (Frost). *Phytopath.* 14: 26. (Abst.).
- _____, and _____. 1926. (3437)
Relation of temperature to spore germination and growth of *Urocystis cepulae*. *Jour. Agr. Res.* 32: 133-146.
- Walker, M. N. 1926. (3438)
A comparative study of the mosaic diseases of cucumber, tomato and *Physalis*. *Phytopath.* 16: 431-458.
- _____. 1927. (3439)
Cotton pathology and physiology. *Fla. Agr. Exp. Sta. Ann. Rept.*, 38-39.
- _____. 1928. (3440)
Soil temperature studies with cotton. *Fla. Agr. Exp. Sta. Bull.* 197, 345-371.
- Wallace, E. 1910. (3441)
Spray injury induced by lime-sulfur preparations. *N. Y. (Cornell) Agr. Exp. Sta. Bull.* 288, 101-137.
- _____. 1913. (3442)
Scab disease of apples. *N. Y. (Cornell) Agr. Exp. Sta. Bull.* 335, 541-624.
- _____, and H. H. Whetzel. 1910. (3443)
Peach leaf curl. *N. Y. (Cornell) Agr. Exp. Sta. Bull.* 276, 275-298.
- Wallace, T. 1926-1927. (3444)
An experiment on the winter-killing of vegetable crops in market gardens. *Jour. Bath, W. and S. Counties Soc.* 1 (6): 190-194.
- _____. 1927-1928. (3445)
Leaf scorch on fruit trees. *Jour. Pomol. and Hort. Sci.* 6: 243-281.
- _____. 1928. (3446)
Leaf scorch on fruit trees. Part IV. The control of leaf scorch in the field. *Jour. Pomol. and Hort. Sci.* 7: 1-31.
- _____. 1929. (3447)
Investigations on chlorosis of fruit trees IV. *Jour. Pomol. and Hort. Sci.* 7: 172-198, 251-269.
- _____. 1929. (3448)
Frost injury to apple trees. *Gardeners' Chron.* 85: 209-210.
- _____, and C. E. T. Mann. 1925-1926. (3449)
Investigations on chlorosis of fruit trees. *Jour. Pomol. and Hort. Sci.* 5: 115-123.
- Walpert, F. S. 1924. (3450)
Studies in the physiology of the fungi. XVII. The growth of certain wood-destroying fungi in relation to the hydrogen-ion concentration of the media. *Ann. Mo. Bot. Gard.* 11: 43-97.
- Walster, H. L. 1921. (3451)
Rust and the weather. *Science* 53: 346.
- Walter, H. 1929. (3452)
Die Winterschäden an unserer immergrünen Pflanzen während der Kälteperiode Januar-März 1929 und ihre Ursachen. *Naturwissenschaften* 17: 854-859.
- Walton, R. C. 1914. (3453)
The relation of temperature to the expulsion of ascospores of *Endothia parasitica*. *Phytopath.* 4: 52. (Abst.).
- _____. 1925. (3454)
Cause of the peach drop in 1924. *Proc. Pa. State Hort. Assoc.* 66: 71-75.
- _____. 1926. (3455)
Cause and prevention of peach canker. *Proc. Pa. State Hort. Assoc.* 67: 46-50.
- Wann, F. B. 1929. (3456)
A study of chlorosis. *Utah Agr. Exp. Sta. Bull.* 209, 49-50.

-
- _____. 1930. (3457)
Chlorosis yellowing of plants: cause and control. Utah Agr. Exp. Sta. Circ. 85, 1-11.
-
- _____. and E. F. Hopkins. 1927. (3458)
Further studies on growth of *Chlorella* as affected by hydrogen-ion concentration. Bot Gaz. 83: 193-201.
-
- Ward, F. S. 1930. (3459)
Investigations on Panama disease in Malaya. Straits Settlements and Fed. Malay States Dept. Agr. Sci. Ser. (2), 1-26.
-
- Ward, H. M. 1890. (3460)
On some relations between host and parasite in certain epidemic diseases of plants Proc. Roy. Soc., London, 47: 393-443.
-
- _____. 1901. (3461)
The bromes and their rust fungus. Ann. Bot. 15: 560-562.
-
- _____. 1901. (3462)
Disease in plants. London.
-
- _____. 1902. (3463)
On the relations between host and parasite in the bromes and their brown rust, *Puccinia dispersa* (Erikss.). Ann. Bot. 16: 233-315.
-
- _____. 1902. (3464)
On the question of "Predisposition" and "Immunity" in plants. Proc. Cambridge Phil Soc. 11: 307-328.
-
- _____. 1902-1903. (3465)
Experiments on the effect of mineral starvation on the parasitism of the Uredine fungus, *Puccinia dispersa* on species of *Bromus*. Proc. Roy. Soc., London, 71: 130-151.
-
- _____. 1905. (3466)
Recent researches on the parasitism of fungi. Ann. Bot. 19: 1-54.
-
- Wardlaw, C. W. 1927. (3467)
The strawberry disease in Lanarkshire. Ann. Appl. Biol. 14: 197-201.
-
- _____. 1927. (3468)
Note on the occurrence of *Pythium proliferum* deBary, on the roots of the strawberry Ann. Bot. 41: 817-818.
-
- Ware, W. M. 1927. (3469)
Frost injury to apples. Gardeners' Chron. 82: 154.
-
- Warrington, K. 1923. (3470)
The effect of boric acid and borax on the broad bean and certain other plants. Ann Bot. 37: 629-672.
-
- Waterman, A. M. 1928. (3471)
Rose diseases: Their causes and control. U. S. Dept. Agr., Farmers' Bull. 1547, 1-19
-
- Waters, C. W. 1928. (3472)
The control of teliospore and urediniospore formation by experimental methods. Phytopath. 18: 157-213.
-
- Waters, R. 1917. (3473)
Gravy eye, or matter-eye in potatoes. Jour. Agr. New Zealand 14: 357-362.
-
- _____. 1923. (3474)
Apple flesh-collapse or brown-heart. Control measures for orchard and cool store. Jour. Agr. New Zealand 27: 32-41.
-
- Watson, W. 1891. (3475)
Effects of fog on plants grown in the houses at Kew. Nature 45: 16.
-
- Weaver, W. A. 1921. (3476)
Pecan rosette. Proc. Conv. Nat'l Nut Growers' Assoc. 20: 67-72.
-
- Webb, R. W. 1919. (3477)
Studies in the physiology of the fungi X. Germination of the spores of certain fungi in relation to hydrogen-ion concentration. Ann. Mo. Bot. Gard. 6: 201-222.
-
- _____. 1921. (3478)
Studies in the physiology of fungi XV. Germination of the spores of certain fungi in relation to the hydrogen-ion concentration. Ann. Mo. Bot. Gard. 8: 233-341.
-
- _____. 1927. (3479)
Certain factors influencing the development of the mosaic disease in winter wheat Phytopath. 17: 41. (Abst.).
-
- _____. 1927. (3480)
Soil factors influencing the development of the mosaic disease in winter wheat. Jour Agr. Res. 35: 587-614.

- _____. 1928. (3481)
Further studies on the soil relationships of the mosaic disease of winter wheat. Jour. Agr. Res. 36: 53-75.
- _____. and H. Fellows. 1926. (3482)
The growth of *Ophiobolus graminis* Sacc. in relation to hydrogen-ion concentration. Jour. Agr. Res. 33: 845-872.
- Webber, H. J. 1895. (3483)
Fertilization of the soil as affecting the orange in health and disease. U. S. Dept. Agr. Yrbk., 1894, 193-202.
- _____. 1923. (3484)
The June drop of oranges. Calif. Citrogr. 8: 183, 196-197.
- _____. et al. 1919. (3485)
A study of the effects of freezes on citrus in California. Calif. Agr. Exp. Sta. Bull. 304 245-321.
- Weber, G. F. 1921. (3486)
Studies on corn rust. Phytopath. 11: 31-32. (Abst.).
- _____. 1922. (3487)
Studies on corn rust. Phytopath. 12: 89-97.
- _____. 1922. (3488)
Septoria diseases of cereals. Phytopath. 12: 449-470.
- _____. 1922. (3489)
II. Septoria diseases of wheat. Phytopath. 12: 537-585.
- _____. 1925. (3490)
Disease of cucumbers. Fla. Agr. Exp. Sta. Bull. 177, 29-71.
- _____. 1928. (3491)
Plant pathology. (Citrus canker). Fla. Agr. Exp. Sta. Ann. Rept., 65R-78R.
- _____. 1929. (3492)
A Stemphylium leaf spot of tomatoes. Phytopath. 19: 92. (Abst.).
- _____. and A. C. Foster. 1928. (3493)
Diseases of lettuce, romaine, escarole and endive. Fla. Agr. Exp. Sta. Bull. 195, 303-333.
- _____. and G. B. Ramsey. 1926. (3494)
Tomato diseases in Florida. Fla. Agr. Exp. Sta. Bull. 185, 61-138.
- Wedgeworth, H. H., D. C. Neal, and J. M. Wallace. 1927. (3495)
Wilt and blossom-end rot of the tomato. Miss. Agr. Exp. Sta. Bull. 247, 1-18.
- Wehmer, C. 1897. (3496)
II. Einige Beobachtungen über den Einfluss des Alters und der Temperatur auf die Entwicklungsfähigkeit von Mycelpilzsporen. Centbl. Bakt. 3: 104-108, 147-149.
- _____. 1898. (3497)
Die Bacterienfäule (Nassfäule) der Kartoffelknollen. Ber. Deutsch. Bot. Ges. 16 172-177.
- _____. 1900. (3498)
Über einen Fall intensiver Schädigung einer Allee durch ausströmendes Leuchtgas. Zeitschr. Pflanzenkr. 10: 267-269.
- _____. 1917. (3499)
Leuchtgaswirkung auf Pflanzen. I. Ber. Deutsch. Bot. Ges. 35: 135-154, 318-332 403-410.
- _____. 1918. (3500)
Die Wirkung des Gases auf das Wurzelsystem von Holzpflanzen; Ursachen der Gaswirkung. Ber. Deutsch. Bot. Ges. 36: 140-150, 460-464.
- Weigert, J. 1913. (3501)
Hagelschäden an unseren Kulturpflanzen. Landw. Jahrb., Bayern, 3: 49-57.
- Weimer, J. L. 1917. (3502)
Three cedar rust fungi, their life histories and the diseases they produce. N. Y. (Cornell) Agr. Exp. Sta. Bull. 390, 597-641.
- _____. 1924. (3503)
Alternaria leafspot and brownrot of cauliflower. Jour. Agr. Res. 29: 421-441.
- _____. 1926. (3504)
Ringspot of crucifers caused by *Mycosphaerella brassicicola* (Fr.) Lindau. Jour. Agr. Res. 32: 97-132.
- _____. 1926. (3506)
A leaf spot of cruciferous plants caused by *Alternaria herculea*. Jour. Agr. Res. 33: 645-650.

- _____. 1930. (3507)
Temperature and soil-moisture relations of *Fusarium oxysporum* var. *medicaginis*. Jour. Agr. Res. 40: 97-103.
- _____. 1930. (3508)
Alfalfa root injuries resulting from freezing. Jour. Agr. Res. 40: 121-143.
- _____. and L. L. Harter. 1921. (3509)
Wound-cork formation in the sweet potato. Jour. Agr. Res. 21: 637-647.
- _____. and _____. 1923. (3510)
Temperature relations of eleven species of *Rhizopus*. Jour. Agr. Res. 24: 1-40.
- Weir, J. R. 1912. (3511)
A Botrytis on conifers in the Northwest. Phytopath. 2: 215.
- _____. 1913. (3512)
An epidemic of needle diseases in Idaho and western Montana. Phytopath. 3: 252-253.
- _____. 1916. (3513)
Mistletoe injury to conifers in the northwest. U. S. Dept. Agr., Dept. Bull. 360, 1-39.
- _____. 1918. (3514)
Notes on the altitudinal range of forest fungi. Mycologia 10: 4-14.
- _____. 1926. (3515)
A pathological survey of the para rubber tree (*Hevea brasiliensis*) in the Amazon valley. U. S. Dept. Agr., Dept. Bull. 1380, 1-129.
- Weis, Fr. and N. Nielsen. 1927. (3516)
Nogle Unders gelser over Rodfordaerversvampen (*Polyporus radiciperda*). Dansk. Skovf. Tidsskr., Copenhagen, 12: 214-225.
- Weiske, F. 1927. (3517)
Beobachtungen über den Einfluss der Bodenreaktion auf die Entwicklung von Gartengewächsen. Landw. Jahrb. 66: 125-145.
- Weiss, F. 1924. (3518)
The effect of rust infection upon the water requirement of wheat. Jour. Agr. Res. 27: 107-118.
- _____. 1925. (3519)
The conditions of infection in potato wart. Amer. Jour. Bot. 12: 413-443.
- _____. 1928. (3520)
A summary of the important contributions to potato pathology which have appeared in foreign periodical literature in the past year. Proc. Amer. Potato Assoc. 14: 215-225.
- _____. and P. Brierly. 1928. (3521)
Factors of spread and repression in potato wart. U. S. Dept. Agr., Tech. Bull. 56, 1-13.
- _____. J. I. Lauritzen, and P. Brierley. 1928. (3522)
Factors in the inception and development of *Fusarium* rot of stored potatoes. U. S. Dept. Agr., Tech. Bull. 62, 1-35.
- Weiss, J. E. 1918. (3523)
Einfluss der Witterungsverhältnisse auf das auftreten von Pflanzenkrankheiten und tierischen Schädlingen 1916 und 1917. Zeitschr. Pflanzenkr. 28: 116-142, 201-210.
- Weldon, G. P. 1915. (3524)
Smelter fumes injury to vegetation. Calif. Sta. Com. Hort. Mo. Bull. 4, 240-249.
- _____. 1927. (3525)
Weather and fungous development. Pacific Rural Press. 113 (Apr. 9): 499.
- Wellensiek, S. J. 1926. (3526)
Waarneminger over du Klavertengelbrandziekte. Tijdschr. Plantenziekten 32: 265-302.
- Wells, C. G. 1922. (3527)
Identification of bacteria pathogenic to plants previously reported from the Philippine Islands. Philippine Jour. Sci. 20: 279-285.
- Wellman, F. L. 1928. (3528)
The reaction and treatment of soils infested with *Plasmodiophora brassicae* Wor. Phytopath. 18: 141-142. (Abst.).
- _____. 1930. (3529)
Clubroot of crucifers. U. S. Dept. Agr., Tech. Bull. 181, 1-32.
- Wells, A. E. 1917. (3530)
Results of recent investigations of the smelter smoke problem. Jour. Indus. and Engin. Chem. 9: 640-646.
- Wells, H. M. 1929. (3531)
Treating winter injury of apple trees. Mich. Agr. Exp. Sta. Quart. Bull. 11, 186-192.
- Wenholz, H. and W. H. Darragh. 1927. (3532)
The root, stalk, and ear rot diseases of maize. Agr. Gaz. N. S. Wales 38: 39-49.

- Werner, H. O. 1925. (3533)
 Relation of environment to spindle-tuber symptoms. Proc. Amer. Potato Assoc. 11:
 102-106.
- _____. 1926. (3534)
 The spindle-tuber disease as a factor in seed potato production. Nebr. Agr. Exp. Sta.
 Res. Bull. 321, 1-128.
- Werth, E. 1921. (3535)
 Phänologie und Pflanzenschutz. Zeitschr. Pflanzenkr. 31: 81-89.
- West, C. B. 1924. (3536)
 Plant physiology. Sci. Prog. 18: 386-392.
- West, C. J. and C. Hull. 1923. (3537)
 List of manuscript bibliographies in the biological sciences. Nat'l Res. Council Repr.
 and Cir. Series 45: 1-51.
- West, F. L. 1917. (3538)
 The freezing of fruit buds. Utah Agr. Exp. Sta. Bull. 151, 1-24.
- Westerdijk, J. 1915. (3539)
 Phytopathology in the tropics. Ann. Mo. Bot. Gard. 2: 307-313.
- Westgate, J. M. 1917. (3540)
 The yellowing of pineapples on manganese soil. Hawaiian Agr. Exp. Sta. Ann. Rept.,
 1916, 23-24.
- _____. 1920. (3541)
 Manganese investigations. Hawaiian Agr. Exp. Sta. Ann. Rept., 1919, 44.
- Weston, W. H. 1920. (3542)
 Philippine downy mildew of maize. Jour. Agr. Res. 19: 97-122.
- _____. 1921. (3543)
 The occurrence of wheat downy mildew in the United States. U. S. Dept. Agr., Dept.
 Circ. 186, 1-6.
- Wheeler, H. J. and G. E. Adams. 1897. (3544)
 On the use of flowers of sulfur and sulfate of ammonia as preventives of potato scab in
 contaminated soils. R. I. Agr. Exp. Sta. Ann. Rept. 10, 254-268.
- _____, B. L. Hartwell, and N. L. C. Moore. 1899. (3545)
 Upon the after effect of sulfur, when applied to soils for the purpose of preventing
 potato-scab. R. I. Agr. Exp. Sta. Ann. Rept. 12, 163-167.
- _____, and _____. 1902. (3546)
 Conditions determining the poisonous action of chlorids. R. I. Agr. Exp. Sta. Ann. Rept.
 15, 287-304.
- _____, and J. D. Towar. 1893. (3547)
 Observations on the effect of certain fertilizers in promoting the development of the
 potato scab, and possible reasons for the same. R. I. Agr. Exp. Sta. Bull. 26, 141-156.
- _____, and G. M. Tucker. 1894. (3548)
 Further observations upon the effect of soil conditions upon the development of the
 potato scab. R. I. Agr. Exp. Sta. Bull. 30, 66-85.
- _____, and G. M. Tucker. 1895. (3549)
 Upon the effect of barnyard manure and various compounds of sodium, calcium and
 nitrogen upon the development of the potato scab. R. I. Agr. Exp. Sta. Bull. 33, 51-79.
- Wherry, E. T. 1920. (3550)
 Soil tests of Ericaceae and other reaction-sensitive families in northern Vermont and
 New Hampshire. Rhodora 22: 33-49.
- _____. 1920. (3551)
 Plant distribution around salt marshes in relation to soil acidity. Ecology 1: 42-48.
- _____. 1920. (3552)
 Correlation between vegetation and soil acidity in southern New Jersey. Proc. Nat.
 Acad. Sci. 72: 113-119.
- _____. 1922. (3553)
 Soil acidity—its nature, measurement, and relation to plant distribution. Smithsonian
 Inst. Ann. Rept., 1920, 247-268.
- _____. 1922. (3554)
 Recent work on soil acidity and plant distribution. Science 55: 568-570.
- Whetzel, H. H. 1904. (3555)
 Onion blight. N. Y. (Cornell) Agr. Exp. Sta. Bull. 218, 139-161.
- _____. 1906. (3556)
 The blight canker of apple-trees. N. Y. (Cornell) Agr. Exp. Sta. Bull. 236, 177-217.
- _____, et al. 1916. (3557)
 Ginseng diseases and their control. U. S. Dept. Agr., Farmers' Bull. 736, 1-22.

- _____ and J. Rosenbaum. 1912. (3558)
The diseases of ginseng and their control. U. S. Dept. Agr., Bur. Pl. Indus. Bull. 250, 1-44.
- Whipple, O. B. 1907. (3559)
Western slope fruit investigation. Colo. Agr. Exp. Sta. Bull. 118, 1-16.
- _____. 1912. (3560)
Winter injury to fruit buds of the apple and pear. Mont. Agr. Exp. Sta. Bull. 91, 33-45.
- _____. 1912. (3561)
Winter injury to fruit buds of the apple and pear. Proc. Amer. Soc. Hort. Sci. 9: 143-148.
- White, H. E. 1930. (3562)
Bacterial spot of radish and turnip. Phytopath. 20: 653-662.
- White, H. L. 1929. (3563)
The wilt disease of the carnation. Jour. Pomol. and Hort. Sci. 7: 302-323.
- White, J. 1911. (3564)
Bitter pit in apples. Proc. Roy. Soc. Victoria 24: 2-16.
- White, J. W. 1915. (3565)
Concerning the growth and composition of clover and sorrel (*Rumex acetosella*) as influenced by varied amounts of limestone. Pa. Agr. Exp. Sta. Ann. Rept., 1913-1914, 46-66.
- White, R. P. 1924. (3566)
Tomato wilt. Phytopath. 14: 28. (Abst.).
- _____. 1926. (3567)
Tomato wilt investigations. Kan. Agr. Exp. Sta. Tech. Bull. 20, 1-32.
- _____. 1926. (3568)
Rhizoctonia crown rot of carrots. Phytopath. 16: 367-368.
- _____. 1927. (3569)
Studies on tomato wilt caused by *Fusarium lycopersici* Sacc. Jour. Agr. Res. 34: 197-239.
- _____. 1929. (3570)
Winter injury—its cause and how to prevent it. N. J. Agr. 11 (11): 2-3.
- _____. 1930. (3571)
Plant pathology. (*Rhododendron* wilt). N. J. Agr. Exp. Sta. Ann. Rept. 50, 39-44.
- White, T. H. 1928. (3572)
Importance of temperature control of snapdragon rust. Florist's Exchange 69: 612.
- Whitehead, T. and W. A. Pritchard. 1929. (3573)
Dry-rot of swedes. Welsh Jour. Agr. 5: 159-175.
- Whitehouse, W. E. 1919. (3574)
Cold storage for Iowa apples. Iowa Agr. Exp. Sta. Bull. 192, 179-216.
- Whitten, J. C. 1897. (3575)
Winter protection of the peach. Mo. Agr. Exp. Sta. Bull. 38, 140-164.
- Widtsoe, J. A. 1903. (3576)
The relation of smelter smoke to Utah agriculture. Utah Agr. Exp. Sta. Bull. 88, 145-179.
- Wiegand, K. M. 1906. (3577)
The occurrence of ice in plant tissue. Plant World 9: 25-39.
- Wieler, A. 1897. (3578)
Über unsichtbare Rauchschiiden bei Nadelbäumen. Zeitschr. Pflanzenkr. 7: 297-299. (Abst.).
- _____. 1900. (3579)
Über die unsichtbaren Rauchschiiden und insbesondere über die Einwirkung der Salzsäure auf die Laubbäume. Zeitschr. Angew. Chemie 13: 1035.
- _____. 1903. (3580)
Über unsichtbare Rauchschiiden. Zeitschr. Forst. u. Jagdw. 35: 204-225.
- _____. 1905. (3581)
Untersuchungen über die Einwirkung schwefliger Säure auf die Pflanzen. Berlin. (3582)
- _____. 1906. (3582)
Neuere Arbeiten über die Einwirkung saurer Gase auf die Pflanzen. Jahresbr. Ver. Angew. Bot. 3: 166-178.
- _____. 1909. (3583)
Bericht über die auchschadenliteratur der letzten Jahre. (1907). Jahresbr. Ver. Angew. Bot. 6: 73-102.
- _____. 1912. (3584)
Die Entkalkung des Bodens durch Hüttenrauch und ihre Wirkung auf die Pflanze. Jahresbr. Ver. Angew. Bot. 10: 58-74.

- _____. 1912. (3585)
Pflanzenwachstum und Kalkmangel im Boden. Berlin.
- _____. 1919. (3586)
Rauchschäden bei Kokereien. Jahresbr. Ver. Angew. Bot. 16: 64-76.
- _____. 1922. (3587)
Die Beteiligung des Bodens an den durch Rauchsäuren hervorgerufenen Vegetationsschäden. Zeitschr. Forst. u. Jagdw. 54: 534-543.
- _____. 1925. (3588)
Über die Ursache der bei Teerschäden an den Blättern auftretenden Verfärbungen. Bot. Arch. 11: 272-314.
- Wiesmann, R. 1930. (3589)
Über Schorbefall der Lageräpfel. Schweiz. Zeitschr. Obst- und Weinbau 39: 517-522.
- Wiesner, J. 1873. (3590)
Untersuchungen über den Einfluss der Temperatur auf die Entwicklung des *Penicillium glaucum*. Sitzber. Akad. Wiss. Wien. 68: 5-16.
- Wiggans, C. 1925. (3591)
Winter injury to fruit trees. Rept. Iowa State Hort. Soc. 60: 63-71.
- Wilcox, E. M., G. K. K. Link, and V. W. Pool. 1913. (3592)
A dry rot of the Irish potato tuber. Nebr. Agr. Exp. Sta. Res. Bull. 1, 1-88.
- Wilcox, E. V. and W. P. Kelley. 1912. (3593)
The effect of manganese on pineapple plants and the ripening of the pineapple fruit. Hawaii Agr. Exp. Sta. Bull. 28, 1-20.
- Wilcox, R. B. 1926. (3594)
Observations on masking of raspberry mosaic by high temperature. Phytopath. 16: 80. (Abst.).
- Wilfarth, H. and G. Wimmer. 1902. (3595)
Die Wirkung des Kaliums auf des Pflanzenleben nach Vegetationsversuchen mit Kartoffeln, Tabak, Buchweizen, Senf, Zickorien und Hafer. Arb. Deut. Landw. Ges. 68: 1-106.
- _____ and _____. 1903. (3596)
Die Kennzeichen des Kalimangels an den Blättern der Pflanzen. Zeitschr. Pflanzenkr. 13: 82-87.
- _____ and _____. 1903. (3597)
Die Wirkungen des Stickstoff, Phosphorsäure- und Kalimangels auf die Pflanzen. Jour. Landw. 51: 129-138.
- Wilk, L. 1916. (3598)
Rauchschäden durch die Aluminium- und Karbidfabrikation. Archiv. Chemie Mikr. 9: 176-189.
- Wille, F. 1927. (3599)
Untersuchungen über die Beziehungen zwischen Immunität und Reaktion des Zellsaftes. Zeitschr. Pflanzenkr. u. Pflanzenschutz 37: 129-158.
- Williams, C. B. 1929. (3600)
Magnesium deficiency of sandy soil types. N. C. Agr. Exp. Sta. Ann. Rept., 1928, 18-19.
- Williams, J. C. 1926. (3601)
Potash in relation to plant and animal diseases. Amer. Fertilizer 64: 36-38, 64, 66.
- Williams, P. H. 1927. (3602)
The effect of some compounds on Verticillium wilt of tomato. Exp. and Res. Sta., Cheshunt, Herts., Ann. Rept. 13, 38-41.
- _____ et al. 1926. (3603)
Mycological investigations. Exp. and Res. Sta., Cheshunt, Herts., Ann. Rept. 12, 26-46.
- Willis, G. and H. B. Mann. 1930. (3604)
Manganese as a fertilizer. Experiments on South Atlantic Coastal Plain soils. Amer. Fertilizer 72: 21-25.
- Willis, L. G. 1928. (3605)
Response of oats and soybeans to manganese on some Coastal Plain soils. N. C. Agr. Exp. Sta. Bull. 257, 1-13.
- Willis, L. J. and J. O. Carrero. 1921. (3606)
Rice investigations. Porto Rico Agr. Exp. Sta. Rept., 8-9.
- _____ and _____. 1923. (3607)
Influence of some nitrogenous fertilizers on the development of chlorosis in rice. Jour. Agr. Res. 24: 621-640.
- Wilson, E. E. 1918. (3608)
Factors important in the development of perithecia of *Venturia inequalis*. Phytopath. 18: 145-146. (Abst.).

- _____. 1928. (3609)
Studies of the ascigerous stage of *Venturia inequalis* (Cke.) Wint. in relation to certain factors of the environment. *Phytopath.* 18: 375-417.
- Wilson, G. W. 1908. (3610)
Notes on *Peronosporales* in 1907. *Proc. Iowa Acad. Sci.* 15: 85-89.
- _____. 1912. (3611)
Some recent work on *Peronosporales*. *Phytopath.* 2: 129-130.
- Wilson, J. D. 1928. (3612)
A quick-reading atmometer; its use in detecting small variations in rate of air movement. *Ecology* 9: 412-420.
- _____. and A. G. Newhall. 1930. (3613)
The control of celery blight. *Ohio Agr. Exp. Sta. Bull.* 461, 1-30.
- Wilson, W. W. 1912. (3614)
Frosts in New York. N. Y. (Cornell) *Agr. Exp. Sta. Bull.* 316, 505-543.
- Wiltshire, S. P. 1920. (3615)
The apple canker fungus. *Agr. and Hort. Res. Sta., Bristol Univ., Ann. Rept.*, 1919, 23-29.
- Winberg, O. F. E., G. C. Starcher, and C. L. Isbell. 1918. (3616)
Report on freeze injury to citrus trees for 1916 and 1917, with notes on orange culture in South Alabama. *Ala. Agr. Exp. Sta. Bull.* 199, 1-26.
- Wingard, S. A. 1922. (3617)
Yeast-spot of lima beans. *Phytopath.* 12: 525-532.
- _____. 1926. (3618)
Black end of apple. *Phytopath.* 16: 1011-1012.
- Winston, J. R. 1923. (3619)
Citrus scab: Its cause and control. U. S. Dept. Agr., Dept. Bull. 1118, 1-38.
- _____, J. R. Bowman, and W. J. Bach. 1927. (3620)
Citrus melanose and its control. U. S. Dept. Agr., Dept. Bull. 1474, 1-63.
- Winters, R. Y. 1909. (3621)
Celery diseases. *Fla. Agr. Exp. Sta. Ann. Rept.*, 1908, 99-104.
- Wislicenus, H. and F. W. Neger. 1914. (3622)
Über die äusseren und inneren Vorgänge der Einwirkung stark verdünnter saurer Gase und saurer Nebel auf die Pflanze. *Mitt. K. Sachs Forstl. Versuchsanst. Tharandt* 1: 85-175.
- Wislicenus, J. A. 1908-1916. (3623)
Sammlung von Abhandlungen über Abgase und Rauchschiiden. Heft. 1-11. Berlin.
- Wisseman, F. 1927. (3624)
Rauchschiiden und deren Bekämpfung. *Mitt. Deut. Dendrol. Ges.* 38: 252-254.
- Wüber, A. 1920. (3625)
Über die Giftwirkung von Arsen-, Antimon-, und Fluorverbindungen auf einige Kulturpflanzen. *Angew. Bot. Zeitschr. Erf. Nutzpfl.* 2: 161-178.
- Woglum, R. S. 1926. (3626)
The use of oil spray on citrus trees. *Jour. Econ. Ent.* 19: 732-733.
- _____. 1929. (3627)
Oil spray damage to citrus. *Calif. Dept. Agr. Mo. Bull.* 18 (10): 572-573.
- Wolf, F. A. 1914. (3628)
Strawberry leaf blight. *Proc. Ala. State Hort. Soc.* 11: 56-58.
- _____. 1916. (3629)
Citrus canker. *Jour. Agr. Res.* 6: 69-99.
- _____. 1920. (3630)
A bacterial leafspot of velvet bean. *Phytopath.* 10: 73-80.
- _____. 1922. (3631)
Wildfire of tobacco. N. C. Agr. Exp. Sta. Bull. 246, 1-26.
- _____. 1924. (3632)
Bacterial pustule of soybean. *Jour. Agr. Res.* 29: 57-68.
- _____. and R. O. Cromwell. 1917. (3633)
Xylaria root rot of apple. *Jour. Agr. Res.* 9: 269-276.
- _____. and A. C. Foster. 1918. (3634)
Tobacco wildfire. *Jour. Agr. Res.* 12: 449-458.
- _____, I. V. Shunk, and A. C. Foster. 1921. (3635)
Studies in the physiology of some plant pathogenic bacteria. N. C. Agr. Exp. Sta. Tech. Bull. 20, 1-47.
- Wollenweber, H. W. 1913. (3636)
Pilzparasitäre Welkrankheiten der Kulturpflanzen. *Ber. Deutsch. Bot. Ges.* 31: 17-34.

- _____. 1913. (3637)
Studies on the fusarium problem. *Phytopath.* 3: 24-48.
- Wollny, E. 1901. (3638)
Über den Einfluss der Kulturmethode und der Düngung auf die Ausbreitung der Kartoffelkrankheit. *Zeitschr. Pflanzenkr.* 11: 153. (Abst.).
- Wood, J. G. 1929. (3639)
Physiological derangements in vines subsequent to injury by cold. *Aust. Jour. Exp. Biol. and Med. Sci.* 6 (2): 103-106.
- Woodcock, E. F. 1919. (3640)
Observations on the potato disease conditions in Michigan for the summer of 1918. *Mich. Acad. Sci. Rept.* 21: 281-285.
- Woods, A. F. 1897. (3641)
The Bermuda lily disease. *U. S. Dept. Agr., Div. Veg. Physiol. and Path. Bull.* 14, 1-15.
- _____. 1902. (3642)
The relation of nutrition to the health of plants. *U. S. Dept. Agr. Yrbk.*, 1901, 155-176.
- _____. 1902. (3643)
The mosaic disease of tobacco. *U. S. Dept. Agr., Bur. Pl. Indus. Bull.* 18, 1-24.
- Woodworth, C. W. and G. E. Colby. 1899. (3644)
Paris green for the codling-moth. *Calif. Agr. Exp. Sta. Bull.* 126, 1-40.
- Woolman, H. M. and H. B. Humphrey. 1924. (3645)
Summary of literature on bunt, or stinking smut, of wheat. *U. S. Dept. Agr., Dept. Bull.* 1210, 1-44.
- _____. and _____. 1924. (3646)
Studies in the physiology and control of bunt, or stinking smut, of wheat. *U. S. Dept. Agr., Dept. Bull.* 1239, 1-29.
- Wormald, H. 1912. (3647)
Experiments with *Rhizopus nigricans* on tomatoes. *Jour. S. E. Agr. Coll., Wye*, 21: 381-391.
- _____. 1928. (3648)
Notes on plant diseases in 1927. *East Malling Res. Sta. Ann. Rept.*, 1926 and 1927, 111-118.
- Wortmann, J. 1892. (3649)
Über die sogenannte "Stippen" der Aepfel. *Landw. Jahrb. Schweiz* 21: 663-675.
- Wrangell, M. and K. W. Müller. 1927. (3650)
Die Reaktion Württembergischer Böden. Ein Beitrag zur Frage der Beziehungen von Bodenreaktion zu geologischen Ursprung, landwirtschaftlicher Klassifizierung und Vegetation. *Jahr. Ver. Naturkunder, Württemberg*, 83: 112-145.
- Wright, C. H. and T. G. Mason. 1924. (3651)
Concerning correlations between certain soil moisture constants and crinkle of the cotton plant. *Ann. Bull. Dept. Agr. Nigeria* 3: 32-40.
- Wright, R. C. and H. D. Diehl. 1927. (3652)
Freezing injury to potatoes. *U. S. Dept. Agr., Tech. Bull.* 27, 1-22.
- Wüthrich, E. 1892. (3653)
Über die Einwirkung von Metallsalzen und Säuren auf die Keimfähigkeit der Sporen einiger der verbreitetsten parasitischen Pilze unserer Kulturpflanzen. *Zeitschr. Pflanzenkr.* 2: 16-31, 81-94.
- Yamamoto, Y. 1930. (3654)
Ein Beitrag zur Kenntnis der Gattung *Rhizopus*. II. *Jour. Fac. Agr., Hokkaido Imp. Univ., Sapporo, Japan*, 28: 103-327.
- Yamano, Y. 1905. (3655)
Can aluminum salts enhance plant growth? *Bull. Coll. Agr. (Tokyo)* 6: 429-432.
- Yakogi, K. 1927. (3656)
Studies on the *Hypochnus*-disease of *Sesamum indicum* and the pathogenicity of its causal organism to rice plants and soy beans. (Japanese). *Agr. and Hort.* 2: 487-500.
- Yonemaru, T. 1927. (3657)
Über die schädlichen Wirkungen der schwefligen Säuren auf die Pflanzen. *Mitteil. Versuchsst. (Tokyo)* 47: 1-102.
- Yossifovitch, M. 1923. (3658)
Contribution à l'étude de l'Oidium de la Vigne et de son traitement. *Bull. Soc. Bot. France* 70: 574 (Abst.).
- _____. 1929. (3659)
Peronospora arborescens (Berk.) de Bary, parasite très important de *Papaver somniferum* en Yougoslavie. *Rev. Path. Vég. et Ent. Agr.* 16: 235-270.

- Young, E. H. 1930. (3660)
Physiological studies in relation to the taxonomy of *Monascus* spp. Trans. Wis. Acad. Sci. 25: 227-244.
- Young, F. D. and C. C. Cate. 1923. (3661)
Damaging temperatures and orchard heating in the Rogue River Valley, Oregon. U. S. Dept. Agr., Mo. Weather Rev. 51: 617-639.
- Young, H. C. 1922. (3662)
The toxic property of sulfur. Ann. Mo. Bot. Gard. 9: 403-435.
- _____. 1929. (3663)
Cherry leaf spot control. Ohio Agr. Exp. Sta. Bimo. Bull. 141, 179-182.
- _____. 1930. (3664)
Water soluble arsenic in spray material. Ohio Agr. Exp. Sta. Bull. 448, 1-22.
- _____. and C. May. 1927. (3665)
The timing of apple scab sprays. Ohio Agr. Exp. Sta. Bull. 403, 1-28.
- _____. and R. C. Walton. 1924. (3666)
Spray injury. Phytopath. 14: 61. (Abst.).
- Young, P. A. 1930. (3667)
Spray-oil injury in apple leaves and limbs. Phytopath. 20: 122. (Abst.).
- _____. 1930. (3668)
Research on potato viruses in Montana. Phytopath. 20: 135. (Abst.).
- _____. and H. E. Morris. 1927. (3669)
Sclerotinia wilt of sunflowers. Mont. Agr. Exp. Sta. Bull. 208, 1-32.
- Young, V. H. 1926. (3670)
Cotton wilt studies. Phytopath. 16: 76. (Abst.).
- _____. 1927. (3671)
The relationship of soil temperature to the development of cotton wilt. Ark. Agr. Exp. Sta. Bull. 221, 26.
- _____. 1928. (3672)
Cotton wilt studies I. Relation of soil temperature to the development of cotton wilt. Ark. Agr. Exp. Sta. Bull. 226, 1-50.
- _____. et al. 1926. (3673)
Plant diseases. Ark. Agr. Exp. Sta. Ann. Rept., Bull. 215, 52-59.
- Z., G. 1926. (3674)
Research on drought in Russia. Intern. Rev. Sci. and Pract. Agr. 4: 382-398.
- Zacharowa, T. M. 1925. (3675)
Über den Einfluss niedriger Temperaturen auf die Pflanzen. Jahrb. Wiss. Bot. 65: 61-87.
- Zalewski, A. 1883. (3676)
Über Sporenabschnurung und Sporenabfallen bei den Pilzen. Flora 66: 249-271.
- Zeliff, C. C. 1928. (3677)
Studies of the effects of certain organic and inorganic acids on *Sclerotinia sclerotiorum*. Trans. Amer. Microsp. Soc. 47: 468-473.
- Zeller, S. M. 1920. (3678)
Humidity in relation to moisture imbibition by wood and to spore germination in wood. Ann. Mo. Bot. Gard. 7: 51-74.
- _____. 1926. (3679)
European canker of pomaceous fruit trees. Ore. Agr. Exp. Sta. Bull. 222, 1-52.
- Zillig, H. and L. Neimeyer. 1929. (3680)
Beiträge zur Biologie und Bekämpfung des Roten Brenners (*Pseudopeziza tracheiphila* Müller-Thurgau) des Weinstocks. Arb. Biol. Reichsanst. Land- u. Forstw. 17: 1-66.
- Zimmerman, A. 1924. (3681)
Sammelreferate über die Beziehungen zwischen Parasit und Wirtspflanze. Centbl. Bakt. 63: 106-124.
- _____. 1925. (3682)
Sammelreferate über die Beziehungen zwischen Parasit und Wirtspflanze. II. Die Uredineen. Centbl. Bakt. 65: 311-418.
- Zimmerman, P. W. 1930. (3683)
Oxygen requirements for root growth of cuttings in water. Amer. Jour. Bot. 17: 844-861.
- Zlatnik, A. 1925. (3684)
Les associations de la végétation des Kranknôse et le ph. Prag.
- Zobel, H. F. 1914. (3685)
Celery diseases. Gardeners' Chron. 55: 95.

- Zon, R. G. 1904. (3686)
Effects of frost upon forest vegetation. Forest Quarterly 2: 14-21.
- _____. 1912. (3687)
Forests and water in the light of scientific investigation. Nat'l Waterways Comm. Final Report, 206-302.
- Zundel, G. L. 1921. (3688)
The effects of treatment for bunt on the germination of wheat. Phytopath. 11: 469-484.
- Zutavern. 1926. (3689)
Wurzelbrand bei Rüben. Deutsche Landw. Presse 53: 342.

ENVIRONMENTAL FACTOR INDEX

CONTENTS

- I. ALTITUDE
- II. CARBON DIOXIDE
- III. CLIMATE
 - Regional
- IV. CONTROL PRACTICES—Injury from:
 - A. General treatments
 - B. Arsenic-containing compounds
 - C. Copper-containing compounds
 - D. Oil-containing compounds
 - E. Sulphur-containing compounds
 - F. Fumigation compounds
- V. DEW AND FOG
- VI. ELECTRICAL PHENOMENA
 - Lighting, electric current, and static.
- VII. ENVIRONMENT
 - General
- VIII. EXPOSURE
 - Site, slope, position, etc.
- IX. HAIL, ICE, AND SNOW
- X. HOST CHARACTERS
 - A. Chemical and inherent peculiarities
 - B. Growth stage (age, maturity, rate, etc.)
 - C. Vigorous growth favoring disease
 - D. Weak growth favoring disease
- XI. HYDROGEN-ION RELATIONS
 - A. General
 - B. Regulating disease
 - 1. Acid soil reaction favoring disease
 - 2. Alkaline soil reaction favoring disease
 - 3. Cardinal reactions for disease development
 - C. Regulating growth
 - 1. Cardinal reaction of medium for growth of fungi
 - 2. Cardinal reaction of medium for growth of plants other than fungi
 - 3. Plant growth and distribution
- XII. LIGHT
 - 1. General effects
 - 2. Deficiency effects (shade, darkness, etc.)
 - 3. Excess effects (sunlight, etc.)
 - 4. Quality relations

XIII. MOISTURE RELATIONS

- A. General
- B. Air content
 - 1. General
 - 2. Favoring germination of spores
 - 3. Favoring infection
 - 4. Favoring disease
 - a. High humidity
 - b. Low humidity
- C. Desiccation—Influence on:
 - 1. Spore viability
 - 2. Tissue death
- D. Drouth—Influence on:
 - 1. Disease
 - 2. Physiological activities
- E. Evaporation and transpiration rates
- F. Irrigation practices—Influence on:
 - 1. Disease
 - 2. Physiological activities
- G. Soil drainage—Influence on:
 - 1. Disease
 - 2. Physiological activities
- H. Soil moisture content
 - 1. General relations
 - 2. High and excessive, favoring disease
 - 3. Low and deficient, favoring disease
 - 4. Optimum, for infection and disease

XIV. NUTRITIONAL FACTORS

(Those which aid or are harmful to the host plant or which increase or decrease disease resistance)

- A. General
- B. Faulty or malnutrition (excesses and deficiencies in general)
- C. Deficiencies (compounds in deficient quantity for normal host growth, or instances in which an addition was of aid in resisting disease)

1. Boron	6. Nitrogen
2. Calcium	7. Organic matter
3. Iron	8. Phosphorus
4. Magnesium	9. Potash
5. Manganese	10. Sulfur
- D. Excesses (compounds which are in excess for best host development or which brought about a lessening of disease resistance)

1. Alkali	9. Magnesium
2. Aluminum	10. Manganese
3. Ammonium sulfate	11. Nitrogen
4. Arsenic	12. Organic matter
5. Boron	13. Phosphorus
6. Calcium	14. Potash
7. Copper	15. Sodium chloride
8. Iron	16. Zinc

XV. OXYGEN

- A. General
- B. Air—Influence on:
 - 1. Physiological processes, etc.
 - 2. Spore germination and mycelial growth
- C. Soil

XVI. RAIN—Influence on:

- A. Spore production and distribution
- B. Infection
- C. Disease incidence
- D. Physiological and mechanical effects
- E. Spray injury

XVII. SOIL—Influence on:

- A. Fungous diseases
 - 1. Condition, physical
 - 2. Type, texture, etc.
- B. Physiological activities
 - 1. Condition, physical
 - 2. Type, texture, etc.

XVIII. SMOKE, VAPOR, DUST

- A. General (Including dust and soot injuries)
- B. Air (Fume, gas, smoke, and vapor injuries)
- C. Soil (Gas and waste injuries)

XIX. TEMPERATURE RELATIONS

- A. Air
 - 1. General effects
 - 2. Favoring disease, general
 - 3. High (above average), favoring infection and disease
 - 4. Low (below average), favoring infection and disease
 - 5. Cardinal temperatures for:
 - a. Spore formation
 - b. Spore germination
 - c. Vegetative growth
 - d. Infection
 - e. Disease development
 - 6. Lethal temperatures for spores, mycelium, viruses, etc.
 - 7. Storage temperatures and disease or injury
- B. Soil
 - 1. General effects
 - 2. High (above average), favoring infection and disease
 - 3. Low (below average), favoring infection and disease
 - 4. Cardinal temperatures for infection and disease development
- C. Frost and low temperature injury
- D. Winter injury

XX. TIME FACTOR

(Viability, infectiveness, etc., of spores)

XXI. TOXINS AND CHEMOTROPIC RESPONSE

XXII. VENTILATION

- A. Air drainage, etc.
- B. Greenhouse and plant bed
- C. Storages

XXIII. WEATHER FACTORS

General

XXIV. WIND, as an agent of:

- A. Disease spread
- B. Drying and cooling
- C. Mechanical effect

I. ALTITUDE

7, 652, 653, 654, 708, 809, 978, 1050, 1213, 1253, 1706, 1727, 1872, 1989, 1990, 2248, 2283, 2329, 2399, 2654, 2661, 2777, 2899, 3134, 3158, 3330, 3331, 3512, 3514.

II. CARBON DIOXIDE

41, 192, 224, 371, 375, 376, 379, 380, 403, 426, 473, 477, 478, 504, 637, 716, 766, 943, 966, 967, 1014, 1045, 1095, 1204, 1481, 1484, 1514, 1517, 1545, 1753, 1783, 1871, 1960, 1964, 2015, 2016, 2270, 2371, 2372, 2373, 2528, 2646, 2751, 2965, 2976, 3164.

III. CLIMATE

Regional

47, 48, 55, 87, 150, 202, 263, 267, 283, 303, 311, 389, 427, 443, 445, 485, 506, 507, 514, 596, 597, 606, 608, 651, 656, 659, 708, 725, 815, 842, 844, 845, 848, 855, 879, 883, 900, 951, 983, 984, 987, 991, 1016, 1050, 1063, 1075, 1088, 1089, 1090, 1144, 1163, 1165, 1180, 1185, 1194, 1206, 1253, 1348, 1413, 1456, 1522, 1564, 1569, 1669, 1680, 1683, 1692, 1699, 1700, 1701, 1706, 1709, 1727, 1769, 1841, 1872, 1881, 1924, 1925, 1935, 1955, 2088, 2115, 2181, 2187, 2195, 2229, 2233, 2236, 2248, 2303, 2305a, 2376, 2380, 2395, 2396, 2399, 2429, 2468, 2469, 2476, 2479, 2512, 2533, 2536, 2550, 2552, 2575, 2576, 2583, 2586, 2594, 2603, 2612, 2613, 2668, 2678, 2689, 2726, 2729, 2774a, 2827, 2857, 2873, 2899, 2916, 2919, 2945, 2946, 2960, 2973, 3042, 3089, 3124, 3127, 3134, 3136, 3200, 3259, 3267, 3293, 3295, 3314, 3360, 3382, 3414, 3424, 3425, 3430, 3431, 3434, 3435, 3464, 3539, 3636, 3669, 3687.

IV. CONTROL PRACTICES—Injury from:

A. General treatments

126, 190, 586, 625, 730, 903, 1047, 1371, 1428, 1785, 1979, 2222, 2750, 3187, 3276, 3340, 3564.

B. Arsenic-containing compounds

73, 147, 148, 215, 586, 730, 791, 828, 830, 862, 901, 902, 971, 972, 1061, 1136, 1147, 1201, 1244, 1326, 1327, 1362, 1364, 1368, 1432, 1506, 1669, 1712, 1731, 1750, 1758, 2444, 2455, 2733, 2756, 2823, 3011, 3228, 3229, 3231, 3232, 3309, 3454, 3455, 3644, 3664.

C. Copper-containing compounds

41, 74, 141, 142, 143, 193, 291, 292, 369, 455, 559, 586, 677, 707, 791, 811, 827, 831, 886, 902, 905, 906, 941, 1204, 1388, 1525, 1911, 1939, 2079, 2307, 2416, 2532, 2623, 2624, 2657, 2658, 2857, 3062, 3149, 3217, 3441, 3490, 3557, 3663, 3666.

D. Oil-containing compounds

74, 359, 363, 441, 739, 740, 873, 968, 1137, 1743, 1780, 1781, 3406, 3626, 3627, 3667.

E. Sulphur-containing compounds

291, 463, 586, 707, 827, 829, 882, 886, 941, 1012, 1137, 1525, 1529, 1911, 2049, 2079, 2296, 2297, 2658, 2800, 2917, 2974, 3112, 3151, 3407, 3441, 3648, 3666.

F. Fumigation compounds

457, 1207, 1248, 1274, 1782, 1977.

V. DEW and FOG

42, 108, 281, 284, 368, 431, 508, 514, 544, 579, 580, 581,
 671, 709, 711, 783, 876, 881, 883, 884, 939, 983, 984, 991,
 1005, 1028, 1117, 1380, 1415, 1423, 1600, 1779, 1848, 1885,
 2140, 2148, 2262, 2387, 2388, 2473, 2512, 2606, 2618, 2634,
 2642, 2661, 2745, 2774, 2776, 2899, 2919, 2973, 2989, 3011,
 3012, 3028, 3041, 3042, 3044, 3105, 3130, 3159, 3186, 3371,
 3405, 3442, 3475, 3511, 3542, 3619, 3644.

VI. ELECTRICAL PHENOMENA

Lighting, electric current, and static

277, 681, 1316, 1677, 1693, 1694, 1695, 1711, 1713, 1980,
 2250, 2265, 2298, 2325, 2529, 2609, 2625, 2638, 2683, 2912,
 2921, 2952, 2953, 2954, 3075, 3098, 3117a, 3182, 3141,
 3165, 3169, 3177, 3182, 3257, 3418, 3427.

VII. ENVIRONMENT

General

184, 249, 288, 387, 389, 544, 545, 550, 608, 694, 741, 804,
 809, 813, 814, 937, 939, 940, 963, 974, 979, 1178, 1203,
 1241, 1315, 1372, 1433, 1436, 1524, 1609, 1680, 1681, 1813,
 1833, 1963, 1989, 1999, 2129, 2198, 2261, 2265, 2395, 2397,
 2398, 2412, 2441, 2468, 2470, 2475, 2486, 2544, 2549, 2604,
 2643, 2704, 2960, 2978, 3028, 3127, 3387, 3411, 3460, 3462,
 3537, 3681, 3687.

VIII. EXPOSURE

Site, slope, position, etc.

7, 47, 155, 189, 258, 265, 384, 468, 674, 734, 881, 897,
 1050, 1213, 1261, 1336, 1337, 1415, 1417, 1471, 1564, 1680,
 1727, 1995, 2144, 2149, 2198, 2283, 2380, 2399, 2489, 2512,
 2642, 2658, 2899, 3094, 3100, 3167, 3180, 3186, 3211, 3239,
 3346, 3399, 3443, 3485, 3512, 3613, 3616, 3686.

IX. HAIL, ICE, and SNOW

92, 210, 257, 465, 519, 770, 816, 998, 1048, 1323, 1370,
 1487, 1505, 1723, 1914, 1984, 2062, 2265, 2280, 2325, 2493,
 2509, 2537, 2620, 2683, 2756, 2859, 2872, 2874, 2923, 2955,
 3101, 3120, 3153, 3156, 3198, 3403, 3414, 3501.

X. HOST CHARACTERISTICS

A. Chemical and inherent peculiarities

2, 135, 184a, 229, 261, 386, 554, 605, 606, 633, 762, 763,
 815, 838, 920, 979, 1023, 1025, 1052, 1053, 1146, 1197,
 1357, 1413, 1451, 1687, 1690, 1752, 1768, 2005, 2042, 2061,
 2181, 2220, 2246, 2295, 2429, 2436, 2437, 2439, 2441, 2472,
 2572, 2646, 3032, 3066, 3200, 3202, 3301, 3345, 3382, 3391,
 3432, 3460, 3463, 3472, 3599, 3675, 3682.

B. Growth stage

Age, maturity, rate, etc.

7, 79, 167, 177, 189, 219, 249, 260, 265, 308, 317, 369, 381,
 385, 407, 444, 454, 463, 479, 492, 507, 508, 521, 628, 636,
 702, 747, 759, 762, 794, 804, 805, 806, 879, 880, 885, 929,
 985, 987, 988, 990, 1009, 1018, 1089, 1118, 1165, 1168,
 1180, 1197, 1214, 1299, 1312, 1317, 1355, 1379, 1412, 1432,
 1436, 1524, 1530, 1569, 1584, 1603, 1631, 1669, 1670, 1680,
 1687, 1701, 1709, 1727, 1728, 1767, 1770, 1816, 1825, 1840,
 1853, 1906, 1945, 1974, 2087, 2093, 2123, 2128, 2134, 2158,
 2161, 2171, 2198, 2232, 2250, 2274, 2292, 2299, 2305, 2373,
 2377, 2397, 2399, 2401, 2436, 2440, 2470, 2473, 2500, 2503,
 2510, 2512, 2529, 2535, 2549, 2552, 2559, 2576, 2602, 2639,
 2642, 2660, 2677, 2689, 2707, 2712, 2717, 2719, 2730, 2734,
 2749, 2754, 2770, 2774a, 2776, 2811, 2820, 2828, 2846, 2849,
 2855, 2897, 2900, 2909, 2928, 2966, 2976, 2978, 3010, 3053,
 3054, 3088, 3104, 3110, 3127, 3134, 3149, 3167, 3178, 3179,
 3180, 3185, 3202, 3258, 3270, 3280, 3295, 3299, 3301, 3337,
 3352, 3364, 3391, 3395, 3409, 3425, 3430, 3431, 3437, 3443,
 3464, 3479, 3485, 3509, 3514, 3532, 3575, 3611, 3620, 3682.

C. Vigorous host growth favoring disease

107, 108, 184, 203, 282, 365, 446, 488, 511, 520, 565, 589,
617, 676, 813, 870, 918, 935, 939, 973, 1034, 1035, 1041,
1154, 1164, 1184, 1195, 1210, 1215, 1257, 1421, 1582, 1592,
1597, 1636, 1675, 1676, 1773, 1835, 2005, 2050, 2087, 2240,
2333, 2367, 2439, 2457, 2464, 2468, 2470, 2473, 2474, 2475,
2510, 2572, 2589, 2637, 2641, 2646, 2673, 2686, 2707, 2712,
2718, 2719, 2748, 2763, 2765, 2788, 2812, 2966, 3092, 3093,
3104, 3106, 3107, 3189, 3239, 3289, 3316, 3343, 3380, 3443,
3460, 3466, 3631, 3643.

D. Weak host growth favoring disease

82, 84, 90, 105, 119, 124, 125, 139, 166, 257, 288, 298, 445,
450, 527, 537, 579, 707, 711, 739, 757, 800, 853, 859, 870,
897, 930, 935, 937, 938, 940, 965, 1032, 1033, 1063, 1111,
1112, 1123, 1190, 1191, 1213, 1244, 1249, 1351, 1392, 1434,
1515, 1516, 1686, 1757, 1854, 1875, 1932, 2023, 2145, 2236,
2258, 2370, 2378, 2396, 2403, 2408, 2458, 2601, 2602, 2656,
2659, 2712, 2728, 2744, 2745, 2766, 2771, 2810, 2813, 2984,
3008, 3045, 3071, 3089, 3158, 3180, 3212, 3213, 3305, 3343,
3467, 3468, 3484, 3526, 3611.

XI. HYDROGEN-ION RELATIONS

A. General

8, 98, 229, 343, 344, 516, 554, 598, 813, 841, 859, 934, 970,
1254, 1362, 1776, 1803, 1814, 1897, 1898, 1973, 2119, 2139,
2467, 2492, 2555, 2665, 2790, 2825, 2971, 2995, 3144, 3254,

B. Regulating disease

1. Acid soil reaction favoring disease

50, 51, 99, 102, 117, 222, 320, 432, 503, 551, 561, 562, 576,
603, 611, 616, 635, 689, 773, 912, 934, 1020, 1023, 1038,
1105, 1181, 1193, 1271, 1288, 1344, 1408, 1477, 1606, 1625,
1626, 1653, 1772, 1819, 1880, 1901, 1913, 1919, 2034, 2058,
2117, 2118, 2124, 2204, 2295, 2301, 2314, 2355, 2364, 2370,
2483, 2593, 2642, 2724, 2790, 2860, 2862, 2904, 2914, 2972,
3238, 3254, 3274, 3344, 3348, 3364, 3376, 3417, 3467, 3495,
3528, 3587

2. Alkaline soil reaction favoring disease

72, 279, 347, 486, 562, 610, 627, 640, 668, 792, 800, 859,
890, 914, 915, 917, 1051, 1104, 1106, 1119, 1131, 1258, 1324,
1416, 1453, 1533, 1621, 1651, 1691, 1763, 1765, 1821, 2052,
2053, 2054, 2056, 2081, 2082, 2197, 2261, 2417, 2439, 2561,
2642, 2780, 2821, 2827, 2850, 2852, 2907, 2971, 2982, 2983,
3191, 3218, 3254, 3416, 3547, 3548, 3549, 3557, 3607.

3. Cardinal soil reactions for disease development

56, 59, 77, 102, 117, 392, 688, 793, 915, 916, 917, 1051,
1056, 1104, 1106, 1131, 1132, 1243, 1490, 1492, 1534, 1650,
1651, 1712a, 1918, 2034, 2044, 2046, 2047, 2057, 2175, 2190,
2314, 2414, 2542, 2724, 2827, 2972, 2977, 2980, 3248, 3252,
3255, 3416, 3516, 3519, 3528, 3529, 3650, 3689.

C. Regulating growth

1. Cardinal reaction of medium for growth of fungi

4, 16, 61, 99, 135, 214, 229, 333, 343, 344, 397, 400, 401, 410,
411, 414, 415, 417, 470, 523, 547, 638, 646, 714, 735, 774,
779, 818, 839, 840, 863, 866, 867, 912, 995, 996, 997, 1073,
1076, 1077, 1166, 1184, 1243, 1386, 1401, 1421, 1442, 1489,
1491, 1492, 1550, 1576, 1589, 1602, 1645, 1748, 1779, 1789,
1805, 1807, 1841, 1867, 1884, 1887, 1889, 1909, 1911a, 1912,
1915, 1917, 1960, 1961, 1981, 1998, 2006, 2027, 2047, 2058,
2069, 2070, 2071, 2108, 2109, 2110, 2154, 2178, 2210, 2211,
2213, 2216, 2236, 2268, 2316, 2320, 2321, 2345, 2346, 2347,
2348, 2351, 2352, 2376, 2463, 2514, 2525, 2528, 2538, 2542,
2545, 2546, 2587, 2640, 2672, 2707, 2762, 2798, 2799, 2833,
2850, 2852, 2914, 2915, 2931, 2972, 2979, 2980, 3013, 3032,
3114, 3122, 3197, 3223, 3248, 3252, 3254, 3273, 3296, 3306,
3322, 3324, 3326, 3362, 3416, 3434, 3450, 3477, 3478, 3482,
3488, 3489, 3516, 3547, 3569, 3571, 3635, 3662, 3677, 3679.

2. Cardinal reaction of medium for plants other than fungi
19, 57, 102, 315, 616, 667, 773, 782, 793, 1036, 1104, 1193,
1240, 1467, 1493, 1534, 1712a, 1843, 1962, 2046, 2094, 2207,
2817, 2977, 2980, 3244, 3383, 3397, 3458, 3517, 3550, 3552.
3. Plant growth and distribution
100, 101, 103, 116, 118, 237, 542, 603, 604, 667, 841, 1158,
1222, 1240, 1443, 1772, 1787, 2031, 2191, 2295, 2301, 2389,
2402, 2560, 2806, 2807, 2808, 2818, 3238, 3348, 3365, 3417,
3550, 3551, 3552, 3553, 3554, 3587, 3684.

XII. LIGHT

A. General effects

82, 136, 184, 214, 223, 233, 260, 527, 529, 534, 544, 575,
635, 638, 644, 684, 698, 714, 759, 761, 809, 813, 815, 833,
871, 877, 878, 942, 970, 1055, 1092, 1093, 1116, 1168, 1174,
1176, 1252, 1269, 1300, 1319, 1338, 1371, 1473, 1525, 1530,
1539, 1569, 1648, 1728, 1776, 1813, 1887, 1890, 1896, 1904,
1958, 1982, 2014, 2043, 2161, 2262, 2265, 2325, 2387, 2440,
2447, 2456, 2463, 2472, 2645, 2771, 2774, 2774a, 2777, 2812,
2851, 2901, 2902, 2949, 2978, 2997, 3051, 3065, 3109, 3110,
3123, 3142, 3167, 3179, 3215, 3330, 3331, 3346, 3411, 3414,
3460, 3475, 3495, 3515, 3530, 3642, 3682.

B. Deficiency effects (shade, darkness, etc.)

68, 122, 124, 125, 140, 184a, 286, 385, 386, 393, 394, 513,
585, 745, 815a, 835, 885, 930, 950, 1011, 1032, 1056a, 1094,
1110, 1119, 1142, 1170, 1175, 1204, 1239, 1249, 1259, 1260,
1278, 1339, 1415, 1537, 1569, 1666, 1764, 1808, 1885, 1898,
1904, 1989, 2075, 2308, 2367, 2379, 2387, 2502, 2535, 2616,
2646, 2789, 2811, 2976, 3028, 3042, 3090, 3100, 3130, 3146,
3213, 3216, 3335, 3466, 3613.

C. Excess effects (bright sunlight, duration, etc.)

47, 132, 143, 236, 307, 358, 380, 385, 494a, 509, 510, 537,
543, 586, 626, 670, 727, 777, 808, 947, 983, 988, 989, 990,
992, 1025, 1076, 1094, 1113, 1156, 1164, 1165, 1262, 1294,
1317, 1336, 1337, 1393, 1440, 1473, 1482, 1559, 1814, 1849,
1865, 1907, 1924, 1968, 1969, 1985, 1996, 2010, 2092, 2102,
2107, 2111, 2208, 2282, 2315, 2329, 2366, 2380, 2415, 2472,
2557, 2558, 2618, 2639, 2658, 2683, 2743, 2750, 2800, 2866,
2916, 2947, 2951, 2973, 3091, 3096, 3109, 3168, 3172, 3173,
3176, 3178, 3211, 3290, 3336, 3448, 3494, 3657.

D. Quality relations

529, 700, 747, 808, 1525, 1941, 1989, 1990, 2004, 2247,
2630, 2717, 3085a, 3463.

XIII. MOISTURE RELATIONS

A. General

31, 68, 123, 197, 298, 427, 434, 479, 488, 492, 496, 527, 584,
585, 594, 596, 597, 599, 671, 789, 794, 800, 813, 974, 984,
985, 991, 1041, 1079, 1081, 1110, 1171, 1370, 1380, 1440,
1459, 1470, 1471, 1479, 1525, 1727, 1728, 1776, 1813, 1815,
1893, 1894, 1925, 2019, 2028, 2164, 2285, 2295, 2325, 2432,
2474, 2475, 2513, 2634, 2643, 2902, 3087, 3096, 3100, 3109,
3145, 3247, 3264, 3268.

B. Air content

1. General

43, 58, 184, 200, 351, 380, 583, 587, 629, 691, 698, 760, 809,
815, 821, 824, 849, 896, 942, 971, 972, 974, 984, 991, 1028,
1174, 1269, 1307, 1308, 1538, 1547, 1689, 1690, 1946, 2090,
2091, 2252, 2262, 2265, 2396, 2397, 2440, 2447, 2466, 2468,
2479, 2489, 2520, 2576, 2596, 2597, 2649, 2774a, 2804, 2905,
2945, 2957, 2960, 3044, 3091, 3104, 3133, 3134, 3179, 3196,
3269, 3327, 3411, 3474, 3608, 3609, 3645, 3658, 3682.

2. Favoring germination of spores
89, 108, 204, 400, 508, 514, 544, 580, 618, 766, 789, 794,
822, 876, 984, 1093, 1110, 1294, 1476, 1600, 1848, 1899,
1900, 2004, 2051, 2168, 2169, 2334, 2386, 2454, 2469, 2471,
2612, 2634, 2918, 2919, 3040, 3041, 3096, 3130, 3327, 3328,
3442, 3502, 3678.
3. Favoring infection
12, 125, 267, 286, 346, 400, 470, 544, 719, 766, 884, 1028,
1032, 1093, 1117, 1565, 1568, 1728, 1733, 1854, 1861, 1887,
2236, 2438, 2448, 2463, 2473, 2497, 2563, 2576, 2594, 2614,
2663, 2763, 2788, 2851, 2875, 2882, 3003, 3005, 3006, 3007,
3044, 3194, 3245, 3287, 3318, 3442, 3502, 3568, 3613, 3665.
4. Favoring disease
 - a. High
13, 42, 47, 82, 94, 122, 131, 213, 231, 234, 241, 265, 355,
365, 368, 376, 413, 451, 460, 491, 514, 555, 589, 645, 696,
697, 719, 727, 751, 811, 823, 848, 883, 884, 885, 887, 929,
950, 1008, 1065, 1162, 1204, 1208, 1249, 1257, 1321, 1376,
1463, 1571, 1666, 1668, 1675, 1705, 1722, 1725, 1743, 1747,
1755, 1808, 1857, 1862, 1864, 2142, 2227, 2229, 2234, 2256,
2299, 2334, 2359, 2379, 2392, 2394, 2424, 2447, 2450, 2456,
2467, 2523, 2527, 2531, 2536, 2574, 2580, 2592, 2612, 2618,
2658, 2668, 2711, 2731, 2747, 2763, 2768, 2774, 2820, 2876,
2879, 2902, 2916, 2918, 2947, 2967, 2981, 3042, 3044, 3054,
3095, 3107, 3110, 3112, 3124, 3279, 3289, 3295, 3358, 3395,
3409, 3557, 3563, 3592, 3638.
 - b. Low
48, 422, 494a, 595, 596, 890, 1180, 1840, 1950, 1990, 2948,
2949, 2976, 2997, 3015, 3356.
- C. Desiccation—Influence on:
 1. Spore viability
311, 408, 788, 849, 1076, 1134, 1350, 2051, 2111, 2164,
2210, 2262, 2304, 3091, 3096, 3308, 3421.
 2. Tissue death
132, 185, 293, 297, 355, 405, 494a, 497, 498, 706, 1062,
1097, 1237, 1317, 1318, 1439, 2261, 2329, 2515, 2655, 2814,
3153, 3171, 3185, 3560, 3570.
- D. Drouth—Influence on:
 1. Disease
68, 90, 200, 257, 311, 407, 554, 555, 727, 832, 834, 846, 937,
939, 1056, 1163, 1190, 1242, 1255, 1285, 1381, 1400, 1459,
1482, 1496, 1509, 1532, 1623, 1841, 1874, 2028, 2033, 2115,
2232, 2289, 2476, 2585, 2602, 2690, 2775, 2961, 3015, 3068,
3085, 3150, 3159, 3180, 3183, 3253, 3310, 3337, 3359, 3523,
3526.
 2. Physiological activities
36, 93, 121, 139, 164, 188, 269, 352, 353, 367, 380, 382, 383,
482, 484, 492, 532, 543, 583, 584, 585, 624, 669, 704, 705,
706, 707, 722, 723, 739, 987, 988, 989, 1003, 1018, 1063,
1064, 1081, 1116, 1144, 1171, 1219, 1266, 1323, 1325, 1393,
1414, 1425, 1440, 1482, 1530, 1532, 1669, 1771, 1863, 1940,
2037, 2136, 2141, 2156, 2186, 2209, 2225, 2414, 2443, 2449,
2484, 2515, 2534, 2578, 2591, 2618, 2619, 2626, 2662, 2681,
2682, 2683, 2792, 2830, 3038, 3046, 3087, 3142, 3168, 3171,
3176, 3346, 3396, 3414, 3476, 3484, 3618, 3667, 3674.
- E. Evaporation and transpiration rates
122, 123, 132, 168, 173, 176, 242, 244, 297, 355, 494a, 497,
498, 509, 510, 543, 592, 595, 650, 670, 899, 946, 1202, 1237,
1318, 1370, 1447, 1470, 1471, 1671, 1678, 1935, 1968, 1969,
2090, 2092, 2145, 2148, 2182, 2183, 2184, 2209, 2288, 2294,
2308, 2315, 2322, 2333, 2367, 2380, 2457, 2515, 2655, 2703,
2882, 2945, 2946, 2948, 3147, 3168, 3179, 3181, 3214, 3222,
3333, 3476, 3484, 3514, 3555, 3612, 3649.

F. Irrigation practices—Influence on:

1. Disease

257, 311, 351, 444, 451, 645, 676, 713, 719, 1060, 1080,
1895, 1986, 1991, 2417, 2523, 2719, 2961, 3065, 3090, 3145,
3256, 3534.

2. Physiological activities

155, 186, 379, 383, 385, 433, 435, 454, 669, 692, 702, 705,
745, 985, 989, 990, 1238, 1367, 1470, 1511, 1514, 1518, 1536,
2002, 2011, 2093, 2241, 2382, 2416, 2480, 2669, 2693, 2694,
2735, 2840, 2998, 3224, 3258, 3289, 3484.

G. Soil drainage—Influence on:

1. Disease

70, 140, 258, 284, 444, 453, 454, 589, 641, 642, 645, 751,
802, 870, 881, 937, 940, 1089, 1122, 1190, 1278, 1407, 1477,
1515, 1537, 1643, 2028, 2098, 2157, 2172, 2230, 2263, 2417,
2427, 2464, 2467, 2667, 2673, 2742, 2766, 2990, 3142, 3167,
3191, 3245, 3361, 3368, 3373, 3467, 3473, 3555, 3558, 3628,
3643.

2. Physiological activities

369, 435, 464, 536, 852, 923, 1060, 1126, 1139, 1140, 1157,
1197, 1213, 1349, 1426, 1445, 1495, 1716, 1866, 2096, 2383,
2451, 2621, 2683, 2720, 2750, 2840, 2924, 3045, 3086, 3113,
3240, 3291, 3317, 3349, 3399, 3616.

H. Soil moisture content

1. General relations

54, 67, 120, 138, 242, 266, 280, 370, 385, 430, 437, 438, 472,
481, 496, 513, 545, 568, 569, 598, 702, 748, 859, 889, 890,
903, 934, 1003, 1026, 1079, 1130, 1154, 1166, 1168, 1181,
1184, 1220, 1242, 1264, 1287, 1309, 1392, 1407, 1470, 1471,
1500, 1508, 1514, 1519, 1521, 1536, 1569, 1586, 1594, 1629,
1637, 1638, 1680, 1724, 1762, 1871, 1940, 2056, 2092, 2163,
2429, 2447, 2554, 2601, 2642, 2643, 2651, 2653, 2683, 2712,
2735, 2746, 2765, 2777, 2814, 2815, 2816, 2961, 3046, 3086,
3094, 3104, 3131, 3136, 3154, 3173, 3179, 3184, 3207, 3208,
3214, 3241, 3330, 3337, 3339, 3392, 3424, 3431, 3481, 3495,
3515, 3533, 3642.

2. High and excessive, favoring disease

22, 70, 120, 122, 124, 129, 154, 164, 170, 211, 227, 231,
257, 258, 279, 312, 356, 421, 444, 453, 454, 469, 479, 491,
536, 554, 581, 587, 692, 693, 694, 697, 719, 727, 731, 781,
888, 937, 940, 973, 992, 995, 996, 997, 1006, 1018, 1122,
1124, 1141, 1149, 1167, 1172, 1208, 1220, 1223, 1239, 1321,
1377, 1394, 1402, 1495, 1506, 1520, 1536, 1543, 1544, 1595,
1597, 1603, 1621, 1648, 1684, 1716, 1763, 1765, 1865, 1870,
1875, 1907, 1908, 1921, 1991, 1995, 2011, 2018, 2067, 2103,
2123, 2130, 2131, 2148, 2157, 2165, 2230, 2241, 2243, 2303,
2383, 2438, 2449, 2450, 2662, 2677, 2682, 2720, 2748, 2751,
2850, 2950, 3004, 3008, 3045, 3072, 3076, 3113, 3182, 3199,
3246, 3255, 3274, 3315, 3316, 3358, 3361, 3375, 3385, 3427,
3445, 3467, 3468, 3479, 3494, 3519, 3523, 3543, 3555, 3563,
3641, 3643.

3. Low and deficient, favoring disease

7, 83, 131, 161, 168, 173, 174, 176, 260, 354, 358, 493, 553,
554, 583, 596, 675, 705, 761, 832, 930, 989, 1061, 1063,
1080, 1116, 1141, 1144, 1156, 1163, 1370, 1371, 1400, 1429,
1599, 1669, 1779, 1840, 1903, 1936, 1937, 1938, 2011, 2126,
2135, 2136, 2143, 2144, 2145, 2182, 2183, 2184, 2209, 2588,
2652, 2682, 2718, 2825, 2826, 2910, 3042, 3043, 3184, 3212,
3222, 3251, 3476, 3484, 3534, 3651.

4. Optimum, for infection and disease

168, 173, 545, 756, 757, 761, 838, 915, 935, 1111, 1149, 1196, 1308, 1373, 1543, 1544, 1596, 1630, 1638, 1824, 1895, 1966, 2131, 2133, 2158, 2159, 2231, 2232, 2426, 2435, 2538, 2539, 2540, 2587, 2594, 2705, 2707, 3183, 3297, 3302, 3305, 3381, 3425, 3479, 3480, 3507, 3519, 3566, 3646.

XIV. NUTRITIONAL FACTORS

(Those which aid or are harmful to the host plant or which increase or decrease disease resistance.)

A General

49, 108, 151, 163, 240, 248, 258, 320, 395, 396, 434, 440, 445, 513, 515, 563, 602, 608, 610, 618, 656, 676, 715, 772, 813, 850, 852, 877, 878, 942, 947, 987, 1000, 1033, 1035, 1086, 1089, 1101, 1140, 1195, 1197, 1210, 1214, 1238, 1242, 1258, 1271, 1272, 1365, 1366, 1367, 1371, 1392, 1407, 1413, 1415, 1418, 1432, 1436, 1438, 1453, 1454, 1503, 1516, 1587, 1592, 1649, 1762, 1776, 1797, 1809, 1813, 1816, 1819, 1834, 1836, 1838, 1850, 1851, 1852, 1890, 1896, 1907, 1910, 2001, 2013, 2014, 2038, 2050, 2060, 2076, 2089, 2093, 2158, 2160, 2183, 2215, 2226, 2238, 2258, 2274, 2295, 2325, 2331, 2389, 2410, 2411, 2439, 2449, 2467, 2472, 2510, 2572, 2601, 2613, 2621, 2643, 2646, 2700, 2714, 2715, 2744, 2851, 2906, 3001, 3033, 3043, 3046, 3072, 3077, 3104, 3106, 3107, 3127, 3128, 3146, 3156, 3167, 3201, 3214, 3219, 3224, 3239, 3281, 3320, 3343, 3344, 3381, 3382, 3423, 3450, 3465, 3495, 3518, 3628, 3642, 3682.

B Faulty or mal-nutrition (excesses and deficiencies in general)

30, 36, 51, 62, 70, 93, 104, 132, 149, 236, 274, 283, 338, 353, 364, 453, 495, 528, 558, 585, 611, 615, 631, 632, 664, 665, 689, 737, 802, 813, 832, 833, 836, 870, 881, 930, 937, 940, 944, 969, 1003, 1006, 1009, 1020, 1063, 1081, 1138, 1157, 1160, 1187, 1191, 1213, 1232, 1234, 1236, 1289, 1295, 1342, 1349, 1351, 1393, 1411, 1416, 1434, 1448, 1449, 1454, 1477, 1499, 1525, 1580, 1613, 1676, 1716, 1815, 1821, 1851, 1880, 1898, 1930, 1959, 2085, 2096, 2117, 2201, 2265, 2299, 2370, 2416, 2446, 2484, 2498, 2541, 2557, 2616, 2665, 2676, 2683, 2721, 2748, 2765, 2766, 2778, 2854, 2867, 3068, 3142, 3154, 3155, 3170, 3230, 3235, 3380, 3409a, 3427, 3483, 3484, 3545, 3546, 3607, 3621.

C. Deficiencies (compounds in deficient quantity for normal host growth or instances in which an addition was of aid in resisting disease)

1. Boron

1234, 1236, 1633, 1634, 2147, 3060, 3470.

2. Calcium

3, 103, 211, 243, 262, 418, 420, 432, 583, 589, 619, 720, 721, 773, 850, 893, 969, 1008, 1044, 1066, 1067, 1083, 1105, 1135, 1181, 1200, 1232, 1235, 1237, 1289, 1333, 1340, 1408, 1474, 1504, 1625, 1626, 1741, 1959, 2031, 2034, 2085, 2121, 2146, 2228, 2253, 2301, 2446, 2493, 2494, 2497, 2572, 2593, 2664, 2724, 2911, 2990, 3057, 3144, 3216, 3370, 3584, 3585.

3. Iron

96, 149, 158, 435, 436, 515, 553, 627, 655, 706, 710, 795, 801, 920, 964, 1082, 1120, 1126, 1128, 1129, 1130, 1135, 1151, 1211, 1228, 1494, 1624, 1625, 1626, 1716, 1800, 1823, 1838, 1898, 2011, 2045, 2081, 2083, 2094, 2122, 2220, 2319, 2439, 2561, 2589, 2626, 2700, 2722, 2795, 2796, 2982, 3060, 3244, 3457, 3540, 3541, 3606.

4. Magnesium

1083, 1084, 1085, 1135, 1525, 1613, 1652, 1933, 1971, 2011, 2081, 2146, 2223, 2306, 3060, 3600, 3604.

5. Manganese

77, 418, 1121, 1151, 1448, 1534, 1712a, 1886, 2011, 2021,
2081, 2122, 2125, 2137, 2199, 2496, 2699, 2721, 2821, 2822,
2891, 3060, 3604, 3605.

6. Nitrogen

236, 287, 288, 385, 495, 603, 990, 1135, 1195, 1365, 1495,
1497, 1498, 1525, 1580, 1823, 1926, 1927, 2008, 2011, 2188,
2189, 2242, 2253, 2364, 2425, 2458, 2671, 2683, 2728, 2845,
2855, 2907a, 2994, 3060, 3111, 3207, 3208, 3256, 3286, 3292,
3333, 3369, 3370, 3414, 3446, 3456, 3596, 3597, 3673.

7. Organic matter

299, 348, 349, 354, 486, 562, 675, 706, 854, 915, 999, 1002,
1042, 1141, 1160, 1318, 1761, 2046, 2085, 2096, 2135, 2143,
2144, 2145, 2245, 2394, 2764, 2891, 2994, 3256, 3467, 3540.

8. Phosphorus

212, 229, 394, 606, 656, 690, 715, 772, 1009, 1074, 1135,
1180, 1195, 1212, 1229, 1332, 1333, 1351, 1370, 1417, 1419,
1455, 1474, 1536, 1580, 1609, 1932, 2040, 2041, 2106, 2119,
2120, 2253, 2368, 2446, 2500, 2561, 2712, 2877, 2907, 3060,
3111, 3188, 3240, 3284, 3381, 3390, 3557, 3596, 3597.

9. Potash

72, 218, 227, 236, 238, 262, 276, 299, 300, 385, 389, 394,
552, 561, 583, 690, 772, 832, 965, 975, 990, 1050, 1074,
1085, 1135, 1182, 1195, 1229, 1271, 1329, 1351, 1417, 1488,
1525, 1535, 1577, 1579, 1580, 1613, 1752, 1794, 1853, 1885,
1898, 1910, 1940, 1942, 1976, 2008, 2020, 2038, 2085, 2146,
2196, 2253, 2271, 2274, 2306, 2321, 2341, 2370, 2385, 2481,
2500, 2581, 2588, 2608, 2615, 2674, 2681, 2683, 2749, 2781,
2787, 2845, 2853, 2855, 2885, 2886, 2889, 2907, 2907a, 2908,
2922, 3048, 3060, 3111, 3121, 3125, 3203, 3212, 3222, 3240,
3379, 3414, 3445, 3446, 3520, 3595, 3596, 3597, 3601, 3604,
3631, 3648, 3650.

10. Sulfur

859, 916, 1084, 1135, 1243, 1258, 1823, 2052, 2053, 2081,
2122, 2538, 2542, 2971, 3060, 3544.

D. Excesses (compounds which were in excess for best host development or which brought about a lessening of disease resistance)

1. Alkali

147, 148, 395, 396, 428, 517, 692, 797, 854, 1223, 1230,
1231, 1287, 1370, 1371, 1445, 1506, 1726, 1741, 1742, 1953,
1954, 1956, 1973, 2011, 2046, 2382, 2411, 2480, 2631, 2664,
3046, 3484.

2. Aluminum

3, 57, 98, 162, 253, 254, 271, 432, 502, 604, 616, 665, 852,
1020, 1279, 1284, 1331, 1332, 1333, 1467, 1474, 1475, 1653,
1654, 1720, 1744, 1810, 1811, 1880, 1919, 2000, 2105, 2117,
2118, 2119, 2121, 2138, 2139, 2204, 2214, 2260, 2321, 2389,
2506, 2773, 2782, 2783, 2977, 2991, 3059, 3161, 3162, 3394,
3655.

3. Ammonium sulfate

561, 1044, 1060, 2260, 2370, 2783, 2784.

4. Arsenic

43, 336, 337, 533, 647, 1029a, 1225, 1227, 1574, 1785, 1975,
2255, 2356, 2507, 2863, 2878, 3226, 3228, 3625.

5. Boron

26, 250, 252, 316, 336, 337, 339, 402, 600, 612, 614, 620,
621, 623, 769, 886, 1233, 1345, 1468, 1507, 1633, 1717,
1740, 1785, 2251, 2264, 2310, 2328, 2462, 2530, 2890, 2992,
2993, 3227, 3234, 3402, 3470.

6. Calcium
37, 69, 72, 78, 111, 127, 128, 149, 206, 268, 347, 356, 433, 445, 515, 522, 536, 553, 562, 640, 678, 694, 706, 707, 710, 736, 819, 920, 932, 964, 1004, 1015, 1021, 1051, 1082, 1126, 1127, 1128, 1129, 1130, 1158, 1195, 1211, 1231, 1243, 1324, 1328, 1362, 1409, 1446, 1450, 1508, 1651, 1712a, 1716, 1765, 1800, 1823, 1851, 1878, 1898, 1943, 2011, 2021, 2045, 2057, 2081, 2082, 2083, 2116, 2180, 2225, 2408, 2414, 2538, 2555, 2591, 2600, 2615, 2665, 2683, 2697, 2722, 2723, 2781, 2821, 2869, 2891, 3388, 3393, 3449, 3457, 3518, 3544, 3547, 3548, 3549, 3558, 3650, 3666.
7. Copper
193, 335, 337, 548, 599a, 622, 647, 662, 665, 1014, 1205, 1340, 1352, 1587, 1717, 1785, 1898, 2036, 2193, 2295, 2488, 2507, 2579, 2810, 2893, 2895, 2987, 3119, 3341, 3388, 3559.
8. Iron
38, 98, 342, 420, 503, 647, 655, 852, 945, 1223, 1279, 1330, 1474, 1475, 1744, 2035, 2048, 2080, 2099, 2105, 2260, 2487, 2782, 2930, 2991, 3118, 3332.
9. Magnesium
666, 852, 1108, 1223, 1280, 1943, 2983, 3401
10. Manganese
57, 112, 180, 335, 337, 502, 664, 729, 852, 904, 1044, 1127, 1223, 1224, 1572, 1624, 1625, 1737, 1738, 1739, 1744, 1777, 1823, 1944, 2011, 2100, 2116, 2117, 2118, 2124, 2260, 2504, 2506, 2646, 2713, 2995, 2996, 3161, 3332, 3400, 3540, 3565, 3593.
11. Nitrogen
8, 46, 136, 239, 240, 278, 298, 351, 370, 387, 389, 394, 445, 454, 500, 528, 552, 589, 605, 606, 656, 663, 706, 732, 745, 772, 832, 835, 853, 923, 973, 1000, 1001, 1003, 1009, 1017, 1025, 1074, 1195, 1210, 1229, 1271, 1278, 1324, 1363, 1366, 1367, 1368, 1417, 1450, 1499, 1510, 1536, 1551, 1580, 1676, 1722, 1771, 1851, 1866, 1882, 1883, 1885, 1898, 1932, 1940, 2040, 2041, 2054, 2106, 2157, 2185, 2196, 2226, 2238, 2313, 2370, 2393, 2421, 2437, 2439, 2442, 2500, 2524, 2555, 2557, 2661, 2677, 2681, 2712, 2719, 2730, 2748, 2749, 2750, 2765, 2771, 2787, 2812, 2845, 2855, 2888, 2907, 2966, 3099, 3106, 3131, 3170, 3173, 3203, 3235, 3240, 3274, 3280, 3284, 3291, 3363, 3366, 3401, 3483, 3557, 3558, 3621, 3631, 3638, 3643.
12. Organic matter
114, 213, 257, 274, 279, 454, 469, 579, 598, 682, 859, 922, 1003, 1015, 1021, 1183, 1258, 1297, 1321, 1450, 1459, 1512, 1513, 1621, 1623, 1642, 1650, 1763, 1921, 1986, 2089, 2152, 2175, 2303, 2398, 2582, 2667, 2673, 2751, 2829, 2840, 3034, 3065, 3090, 3131, 3173, 3239, 3240, 3246, 3274, 3317, 3381, 3547, 3549, 3650, 3685.
13. Phosphorus
552, 2152, 2933.
14. Potash
194, 347, 552, 560, 663, 1280, 1324, 1366, 1367, 1455, 1741, 2106, 2243, 2300, 2391, 2582, 2646, 2665, 3363.
15. Sodium chloride
1410, 1928, 2046, 2176.
16. Zinc
191, 336, 337, 613, 647, 665, 857, 1029, 1346, 1587, 1791, 1812, 2356, 2488, 2579, 3193, 3401.

XV. OXYGEN

A. General

133, 217, 223, 361, 534, 577, 807, 889, 891, 1435, 1614, 1776, 1783, 2285, 3415, 3460.

B. Air—Influence on:

1. Physiological processes, etc.

716, 748, 1164, 1439, 1753, 1802, 1896, 2227, 2330, 2383,
3152, 3683.

2. Spore germination and mycelial growth

4, 214, 286, 403, 487, 637, 638, 766, 779, 789, 812, 822, 966,
967, 1402, 1637, 1638, 1721, 1839, 1870, 1905, 1923, 2164,
2357, 2526, 2827, 3033, 3247, 3336, 3367, 3646, 3662.

C. Soil

32, 120, 154, 190, 214, 224, 273, 345, 474, 475, 476, 477,
478, 536, 576, 577, 585, 598, 692, 856, 859, 893, 973, 992,
1060, 1062, 1139, 1172, 1187, 1220, 1223, 1371, 1435, 1480,
1481, 1483, 1484, 1495, 1511, 1512, 1513, 1514, 1515, 1516,
1517, 1518, 1519, 1545, 1554, 1555, 1613, 1716, 1792, 1869,
1870, 1871, 1934, 1937, 1960, 1991, 2015, 2016, 2017, 2127,
2186, 2197, 2225, 2309, 2383, 2408, 2451, 2493, 2502, 2555,
2621, 2642, 2751, 2752, 2753, 2801, 2827, 2840, 2924, 2956,
2963, 3072, 3083, 3086, 3182, 3235, 3557, 3641, 3642.

XVI. RAIN—Influence on:

A. Spore production and distribution

311, 431, 440, 539, 670, 948, 949, 984, 985, 1025, 1035,
1068, 1069, 1169, 1374, 1568, 1622, 1684, 1690, 1887, 1907,
2059, 2200, 2513, 2551, 2634, 2880, 2918, 2919, 3012, 3209,
3422, 3453, 3634.

B. Infection

12, 108, 284, 480, 489, 505, 506, 544, 573, 671, 791, 880,
884, 1152, 1704, 1841, 1885, 1887, 2140, 2200, 2363, 2474,
2475, 2476, 2634, 2880, 2881, 2984, 3028, 3105, 3130, 3361,
3371, 3442, 3502, 3620, 3665.

C. Disease incidence

13, 24, 34, 58, 119, 121, 140, 166, 197, 198, 201, 264, 265,
321, 322, 334, 355, 380, 412, 451, 459, 460, 461, 482, 489,
505, 518, 519, 581, 582, 584, 630, 794, 813, 832, 834, 962,
974, 982, 1005, 1013, 1034, 1077, 1086, 1102, 1110, 1123,
1142, 1153, 1210, 1218, 1256, 1257, 1260, 1261, 1263, 1264,
1267, 1380, 1456, 1458, 1460, 1469, 1544, 1559, 1564, 1597,
1668, 1706, 1760, 1824, 1841, 1876, 1907, 1932, 1946, 1963,
2055, 2115, 2150, 2170, 2172, 2241, 2243, 2252, 2262, 2283,
2289, 2392, 2432, 2433, 2465, 2477, 2485, 2552, 2577, 2585,
2594, 2606, 2617, 2642, 2658, 2668, 2757, 2759, 2763, 2769,
2916, 2920, 2924, 2926, 2967, 2968, 2973, 3114, 3136, 3180,
3204, 3237, 3241, 3253, 3269, 3297, 3304, 3310, 3360, 3395,
3405, 3414, 3421, 3422, 3426, 3443, 3451, 3494, 3511, 3523,
3525, 3559, 3619, 3676.

D. Physiological and mechanical effects

252, 522, 588, 1018, 1064, 1140, 1175, 1323, 1389, 1440,
1510, 1515, 1613, 1704, 2075, 2240, 2241, 2242, 2265, 2726,
2992, 2993, 3211, 3290.

E. Spray injury

143, 193, 291, 292, 586, 941, 1388, 2658, 2800, 3149, 3441.

XVII. SOIL—Influence on:

A. Fungous diseases

1. Condition, physical

233, 279, 303, 384, 389, 445, 513, 581, 589, 641, 725, 751,
832, 833, 850, 870, 881, 1008, 1060, 1062, 1086, 1122, 1210,
1297, 1515, 1516, 1592, 1621, 1635, 1763, 1765, 1906, 1960,
2098, 2157, 2360, 2394, 2417, 2427, 2442, 2464, 2593, 2601,
2718, 2742, 2745, 2870, 2924, 2957, 3216, 3246, 3315, 3316,
3361, 3368, 3427, 3467, 3468, 3494, 3533, 3643.

2. Type, texture, etc.

50, 105, 198, 233, 279, 384, 389, 481, 520, 544, 581, 606,
608, 641, 751, 832, 847, 850, 877, 878, 922, 965, 1008, 1018,
1023, 1026, 1089, 1091, 1122, 1124, 1144, 1149, 1180, 1189,
1221, 1242, 1271, 1278, 1297, 1308, 1315, 1328, 1348, 1382,
1415, 1417, 1499, 1515, 1516, 1564, 1570, 1606, 1614, 1621,
1680, 1682, 1691, 1760, 1763, 1895, 1907, 1932, 1945, 2043,
2056, 2098, 2157, 2181, 2197, 2274, 2338, 2394, 2417, 2427,
2464, 2583, 2593, 2594, 2601, 2605, 2649, 2656, 2742, 2745,
2764, 2772, 2828, 2829, 2849, 2920, 2924, 2957, 2963, 2966,
2989, 3001, 3041, 3042, 3065, 3077, 3090, 3106, 3167, 3183,
3184, 3186, 3206, 3246, 3247, 3252, 3361, 3364, 3378, 3416,
3467, 3468, 3494, 3515, 3533, 3534, 3549, 3628, 3637, 3643,

B. Physiological activities

1. Condition, physical

7, 72, 114, 168, 173, 190, 227, 345, 354, 367, 445, 453, 656,
659, 692, 693, 706, 715, 731, 859, 920, 923, 969, 989, 1003,
1018, 1062, 1064, 1139, 1141, 1187, 1191, 1197, 1211, 1349,
1362, 1370, 1409, 1416, 1426, 1446, 1495, 1506, 1716, 1719,
1741, 1746, 1762, 1815, 1898, 1956, 2002, 2033, 2096, 2135,
2143, 2144, 2145, 2184, 2186, 2201, 2263, 2586, 2591, 2600,
2621, 2703, 2721, 2750, 2751, 2758, 2801, 2996, 3043, 3086,
3212, 3389, 3399, 3445, 3446.

2. Type, texture, etc.

72, 114, 138, 168, 173, 195, 227, 243, 354, 367, 370, 453,
464, 468, 484, 494, 563, 612, 627, 656, 659, 692, 706, 713,
715, 729, 734, 854, 859, 920, 923, 964, 989, 999, 1002, 1003,
1006, 1014, 1018, 1083, 1085, 1141, 1174, 1187, 1191, 1235,
1239, 1318, 1362, 1368, 1370, 1426, 1495, 1500, 1506, 1510,
1512, 1518, 1519, 1613, 1654, 1719, 1722, 1737, 1741, 1762,
1898, 1956, 1992, 2002, 2043, 2093, 2096, 2135, 2143, 2144,
2145, 2183, 2201, 2286, 2329, 2416, 2499, 2530, 2559, 2586,
2591, 2600, 2621, 2631, 2669, 2751, 2752, 2786, 2815, 2816,
2869, 2987, 2996, 3046, 3147, 3192, 3346, 3445, 3446, 3476,
3618.

XVIII. SMOKE, VAPOR, DUST

A. General (Including dust and soot injury)

52, 53, 294, 295, 540, 578, 837, 911, 1099, 1100, 1344, 1578,
1585, 1618, 2267, 2273, 2445, 2460, 2461, 2502, 2543, 2567,
2568, 2789, 2790, 2793, 3334, 3624.

B. Air (Fumes, gas, smoke, and vapor injuries)

38, 39, 44, 109, 146, 156, 179, 259, 290, 425, 426, 466, 483,
564, 624, 679, 680, 684, 685, 686, 687, 744, 771, 773, 837,
861, 894, 895, 908, 909, 910, 1019, 1030, 1036, 1062, 1098,
1099, 1109, 1143, 1159, 1174, 1177, 1209, 1246, 1247, 1274,
1342, 1343, 1344, 1347, 1358, 1359, 1360, 1361, 1383, 1384,
1411, 1416, 1423, 1424, 1525, 1553, 1578, 1585, 1751, 1777,
1782, 1788, 1790, 1793, 1796, 1804, 1948, 1957, 2019, 2032,
2097, 2186, 2203, 2222, 2265, 2267, 2272, 2273, 2322, 2324,
2325, 2340, 2386, 2387, 2388, 2405, 2406, 2413, 2430, 2502,
2565, 2567, 2568, 2632, 2685, 2695, 2698, 2702, 2771, 2785,
2789, 2790, 2791, 2793, 2794, 2824, 2901, 2902, 2903, 2933,
3055, 3066, 3073, 3082, 3084, 3160, 3163, 3175, 3226, 3271,
3334, 3499, 3524, 3530, 3576, 3578, 3580, 3582, 3584, 3586,
3587, 3588, 3598, 3622, 3623, 3624, 3657.

C. Soil (Gas and waste injuries)

132, 272, 357, 360, 501, 585, 624, 858, 860, 875, 911, 1020,
1062, 1205, 1334, 1360, 1585, 1751, 1788, 1929, 1957, 2186,
2273, 2302, 2355, 2789, 2887, 2983, 3083, 3088, 3169, 3172,
3175, 3178, 3257, 3498, 3500, 3576, 3581, 3582, 3584, 3585,
3587.

XIX. TEMPERATURE RELATIONS

A. Air

1. General effects

35, 131, 244, 269, 351, 389, 474, 527, 544, 566, 596, 609,
741, 785, 789, 809, 876, 907, 926, 931, 942, 971, 972, 1055,
1113, 1119, 1174, 1210, 1267, 1317, 1336, 1355, 1379, 1417,
1439, 1473, 1527, 1564, 1647, 1769, 1774, 1776, 1813, 1894,
1925, 1968, 2043, 2090, 2092, 2239, 2261, 2262, 2329, 2380,
2396, 2397, 2407, 2435, 2469, 2471, 2473, 2476, 2479, 2503,
2597, 2601, 2647, 2653, 2726, 2750, 2774, 2777, 2803, 2932,
2957, 2960, 2978, 3046, 3135, 3138, 3167, 3179, 3453, 3472,
3514, 3515, 3530, 3608, 3609, 3635, 3642, 3645.

2. Favoring disease, general

67, 136, 145, 151, 280, 306, 373, 374, 375, 377, 434, 513,
521, 589, 629, 708, 716, 749, 810, 815, 824, 843, 881, 981,
1000, 1013, 1024, 1026, 1075, 1103, 1145, 1161, 1162, 1163,
1165, 1168, 1302, 1308, 1379, 1417, 1469, 1515, 1525, 1526,
1610, 1612, 1627, 1689, 1690, 1859, 1877, 1932, 1946, 2249,
2265, 2424, 2473, 2476, 2531, 2536, 2575, 2576, 2628, 2655,
2754, 2769, 2774a, 3104, 3107, 3108, 3134, 3136, 3137, 3139,
3267, 3278, 3305, 3330, 3428, 3574, 3679.

3. High (above average), favoring infection and disease

79, 82, 119, 124, 144, 189, 217, 292, 314, 400, 407, 440, 460,
493, 509, 510, 520, 543, 660, 719, 722, 748, 800, 810, 821,
834, 844, 849, 900, 939, 950, 983, 1005, 1024, 1075, 1102,
1123, 1133, 1136, 1140, 1153, 1163, 1164, 1199, 1257, 1260,
1263, 1302, 1321, 1325, 1337, 1338, 1339, 1348, 1390, 1525,
1540, 1547, 1566, 1575, 1588, 1603, 1668, 1709, 1732, 1746,
1764, 1779, 1875, 1905, 1924, 1936, 1950, 1969, 1988, 2024,
2033, 2095, 2170, 2233, 2234, 2237, 2289, 2384, 2424, 2464,
2465, 2467, 2493, 2511, 2591, 2592, 2606, 2642, 2667, 2711,
2726, 2731, 2747, 2757, 2879, 2902, 2910, 2918, 2948, 2997,
3008, 3028, 3065, 3152, 3180, 3250, 3253, 3255, 3268, 3292,
3305, 3315, 3316, 3318, 3356, 3357, 3386, 3396, 3434, 3451,
3556, 3567, 3643.

4. Low (below average), favoring infection and disease

2, 13, 15, 68, 97, 166, 182, 190, 281, 499, 522, 524, 601, 625,
703, 748, 811, 883, 884, 936, 1022, 1034, 1087, 1096, 1171,
1201, 1202, 1217, 1294, 1389, 1392, 1414, 1434, 1442, 1479,
1509, 1521, 1525, 1600, 1687, 1702, 1732, 1802, 1864, 1898,
1992, 2055, 2161, 2225, 2269, 2291, 2303, 2332, 2390, 2432,
2437, 2616, 2629, 2642, 2654, 2661, 2670, 2714, 2716, 2732,
2803, 2804, 2968, 3010, 3087, 3116, 3149, 3288, 3295, 3372,
3594.

5. Cardinal temperatures for:

a. Spore formation

85, 89, 133, 133, 198, 204a, 226, 246, 286, 305, 440, 499,
541, 618, 638, 657, 746, 766, 815, 825, 874, 915, 981, 1055,
1245, 1376, 1378, 1430, 1460, 1462, 1463, 1466, 1527, 1565,
1567, 1591, 1641, 1689, 1749, 1776, 1779, 1803, 1814, 1828,
1846, 1847, 1888, 1896, 2059, 2073, 2173, 2195, 2318, 2344,
2350, 2351, 2357, 2376, 2404, 2501, 2536, 2575, 2576, 2577,
2599, 2627, 2663, 2848, 3003, 3096, 3134, 3304, 3404a, 3410,
3419, 3453, 3472, 3492, 3496, 3608, 3609, 3620, 3654.

b. Spore germination

21, 40, 61, 75, 88, 89, 157, 178, 209, 214, 216, 225, 362, 366, 374, 390, 429, 469, 470, 549, 618, 649, 683, 696, 717, 718, 761, 766, 787, 788, 789, 794, 808, 812, 822, 825, 839, 840, 874, 891, 927, 928, 929, 970, 1008, 1025, 1027, 1032, 1039, 1055, 1072, 1073, 1112, 1194, 1208, 1250, 1269, 1294, 1296, 1300, 1306, 1350, 1378, 1379, 1430, 1431, 1444, 1460, 1461, 1462, 1464, 1466, 1473, 1476, 1523, 1550, 1557, 1558, 1563, 1566, 1567, 1573, 1591, 1601, 1628, 1637, 1638, 1639, 1640, 1641, 1646, 1692, 1729, 1733, 1756, 1766, 1779, 1824, 1825, 1827, 1829, 1854, 1876, 1920, 1958, 1978, 1982, 1983, 1998, 2004, 2005, 2006, 2007, 2153, 2155, 2161, 2162, 2164, 2168, 2169, 2171a, 2173, 2192, 2268, 2269, 2304, 2305, 2318, 2336, 2344, 2348, 2349, 2350, 2351, 2358, 2362, 2369, 2452, 2454, 2491, 2510, 2564, 2566, 2573, 2574, 2587, 2595, 2602, 2605, 2610, 2627, 2628, 2663, 2672, 2718, 2809, 2819, 2836, 2848, 2856, 2871, 2898, 2944, 2964, 3051, 3108, 3220, 3311, 3314, 3315, 3325, 3326, 3328, 3352, 3385, 3404a, 3408, 3426, 3436, 3461, 3463, 3486, 3487, 3502, 3503, 3504, 3510, 3529, 3542, 3589, 3590, 3611, 3620, 3646, 3658, 3659, 3680.

c. Vegetative growth

5, 6, 11, 16, 17, 18, 28, 40, 45, 60, 61, 80, 130, 133, 145, 152, 159, 165, 167, 175, 198, 214, 220, 221, 231, 232, 241, 246, 251, 270, 279, 285, 286, 287a, 289, 310, 313, 340, 341, 346, 350, 373, 374, 378, 397, 398, 399, 400, 401, 406, 409, 410, 411, 414, 415, 417, 427, 452, 469, 512, 520, 534, 535, 538, 546, 547, 556, 565, 567, 593, 598, 618, 646, 648, 682, 695, 701, 714, 719, 728, 735, 746, 753, 757, 758, 759, 766, 774, 775, 776, 777, 778, 779, 780, 783, 817, 820, 823, 825, 839, 840, 842, 844, 845, 851, 863, 864, 865, 866, 867, 868, 874, 913, 922, 930, 952, 953, 954, 961, 997, 1011, 1027, 1031, 1034, 1072, 1073, 1076, 1077, 1078, 1114, 1122, 1152, 1153, 1166, 1184, 1206, 1245, 1254, 1276, 1281, 1282, 1283, 1290, 1292, 1296, 1297, 1299, 1303, 1305, 1306, 1310, 1353, 1357, 1385, 1386, 1396, 1397, 1398, 1401, 1403, 1404, 1405, 1406, 1420, 1422, 1430, 1442, 1444, 1457, 1531, 1539, 1556, 1561, 1575, 1576, 1589, 1591, 1596, 1604, 1635, 1640, 1643, 1645, 1667, 1672, 1673, 1674, 1682, 1688, 1692, 1697, 1701, 1706, 1709, 1733, 1747, 1748, 1749, 1756, 1775, 1779, 1789, 1803, 1807, 1808, 1820, 1824, 1830, 1839, 1842, 1846, 1855, 1856, 1857, 1862, 1867, 1873, 1879, 1888, 1891, 1897, 1909, 1911a, 1912, 1917, 1921, 1922, 1923, 1925, 1951, 1952, 1970, 1982, 1983, 2007, 2009, 2010, 2025, 2027, 2030, 2058, 2063, 2064, 2068, 2069, 2072, 2074, 2108, 2109, 2110, 2111, 2112, 2114, 2129, 2131, 2151, 2164, 2166, 2167, 2178, 2192, 2202, 2210, 2211, 2216, 2233, 2235, 2236, 2237, 2268, 2275, 2311, 2312, 2320, 2321, 2344, 2346, 2348, 2350, 2351, 2352, 2361, 2363, 2365, 2369, 2376, 2381, 2404, 2424a, 2433, 2456, 2463, 2468, 2491, 2501, 2545, 2546, 2550, 2564, 2571, 2573, 2576, 2595, 2596, 2598, 2599, 2610, 2611, 2672, 2696, 2706, 2710, 2739, 2740, 2742, 2745, 2755, 2757, 2761, 2762, 2780, 2798, 2799, 2802, 2827, 2834, 2835, 2837, 2839, 2841, 2842, 2848, 2850, 2851, 2856, 2868, 2883, 2884, 2905, 2913, 2931, 2944, 2950, 2964, 2980, 2984, 2985, 3000, 3008, 3014, 3018, 3019, 3021, 3023, 3024, 3025, 3026, 3027, 3030, 3031, 3031a, 3033, 3035, 3056, 3097, 3114, 3115, 3129, 3185, 3199, 3223, 3241, 3242, 3243, 3272, 3273, 3280, 3283, 3285, 3294, 3298, 3302, 3304, 3305, 3306, 3307, 3308, 3320, 3321, 3322, 3325, 3326, 3328, 3336, 3338, 3350, 3362, 3378, 3389, 3398, 3409, 3410, 3419, 3425, 3426, 3434, 3436, 3437, 3439, 3440, 3459, 3460, 3466, 3488, 3489, 3491, 3492, 3494, 3496, 3503, 3507, 3510, 3526, 3562, 3571, 3573, 3590, 3592, 3615, 3617, 3630, 3633, 3647, 3654, 3656, 3660, 3669, 3672, 3680.

d. Infection

11, 16, 17, 18, 76, 153, 232, 270, 286, 310, 318, 319, 400,
 511, 549, 658, 719, 760, 787, 826, 872, 891, 923, 924, 953,
 1093, 1094, 1118, 1188, 1198, 1199, 1276, 1294, 1305, 1353,
 1356, 1379, 1399, 1501, 1523, 1538, 1566, 1600, 1601, 1607,
 1627, 1629, 1639, 1643, 1644, 1678, 1728, 1729, 1730, 1733,
 1734, 1806, 1825, 1841, 1842, 1844, 1854, 1855, 1857, 1860,
 1861, 1862, 1925, 1965, 1993, 2006, 2131, 2162, 2173, 2194,
 2233, 2236, 2269, 2276, 2292, 2314, 2348, 2358, 2362, 2369,
 2376, 2470, 2474, 2475, 2497, 2527, 2573, 2576, 2605, 2614,
 2627, 2648, 2649, 2652, 2706, 2707, 2708, 2709, 2757, 2761,
 2763, 2875, 2984, 3002, 3003, 3004, 3005, 3007, 3194, 3196,
 3280, 3301, 3313, 3315, 3318, 3339, 3371, 3392, 3426, 3430,
 3463, 3487, 3503, 3507, 3521, 3522, 3526, 3572, 3603, 3617,
 3620, 3637, 3680.

e. Disease development

18, 27, 61, 63, 66, 82, 152, 172, 233, 234, 246, 346, 365, 379,
 456, 498a, 568, 571, 573, 574, 630, 746, 747, 752, 755, 786,
 793, 805, 850, 891, 924, 929, 933, 953, 960, 961, 982, 993,
 1026, 1043, 1058, 1065, 1068, 1074, 1094, 1134, 1142, 1179,
 1186, 1270, 1291, 1298, 1302, 1304, 1307, 1310, 1311, 1353,
 1399, 1502, 1531, 1570, 1571, 1583, 1593, 1605, 1607, 1608,
 1610, 1611, 1644, 1645, 1689, 1754, 1755, 1806, 1844, 1857,
 1888, 2005, 2026, 2067, 2113, 2114, 2165, 2171a, 2218, 2236,
 2373, 2377, 2423, 2450, 2545, 2547, 2594, 2595, 2596, 2627,
 2629, 2636, 2705, 2730, 2756, 2837, 2838, 2876, 2883, 2916,
 2962, 2981, 2984, 2999, 3001, 3014, 3039, 3109, 3110, 3195,
 3289, 3301, 3304, 3316, 3374, 3376, 3377, 3433, 3434, 3439,
 3440, 3493, 3494, 3495, 3506, 3529, 3563, 3602, 3603, 3668,
 3671, 3672.

6. Lethal temperatures for spores, mycelium, viruses, etc.

5, 40, 85, 130, 152, 205, 214, 220, 235, 287a, 301, 310, 311,
 344, 397, 398, 399, 400, 401, 409, 410, 411, 414, 415, 416,
 417, 439, 505, 570, 572, 590, 593, 618, 701, 774, 775, 777,
 778, 779, 783, 784, 786, 826, 843, 863, 864, 865, 866, 867,
 868, 872, 925, 981, 1076, 1077, 1078, 1150, 1155, 1179,
 1282, 1283, 1290, 1300, 1321, 1385, 1386, 1398, 1430, 1437,
 1485, 1552, 1556, 1581, 1591, 1598, 1612, 1617, 1635, 1672,
 1673, 1674, 1697, 1736, 1748, 1779, 1795, 1807, 1808, 1818,
 1822, 1842, 1879, 1888, 1905, 1911a, 1912, 1922, 1949, 1952,
 1970, 2025, 2027, 2057, 2067, 2078, 2107, 2108, 2109, 2110,
 2111, 2112, 2132, 2151, 2173, 2202, 2210, 2211, 2216, 2239,
 2284, 2289, 2290, 2305, 2312, 2335, 2344, 2346, 2348, 3249,
 2350, 2361, 2374, 2381, 2403, 2420, 2422, 2423, 2424a, 2468,
 2510, 2536, 2590a, 2606, 2640, 2701, 2745, 2761, 2798, 2799,
 2841, 2847, 2848, 2925, 2950, 3013, 3017, 3018, 3019, 3020,
 3021, 3022, 3024, 3025, 3026, 3027, 3030, 3031a, 3036, 3052,
 3114, 3143, 3190, 3225, 3233, 3243, 3285, 3321, 3322, 3323,
 3326, 3336, 3380, 3438, 3463, 3491, 3502, 3504, 3527, 3562,
 3629, 3630, 3632, 3634, 3654.

7. Storage temperatures and disease or injury

9, 10, 27, 28, 151, 171, 368, 371, 372, 374, 375, 376, 377,
 380, 498a, 691, 712, 855, 883, 985, 1166, 1291, 1670, 1692,
 1754, 1855, 1856, 1857, 1858, 1859, 1860, 1925, 2022, 2026,
 2091, 2093, 2373, 2517, 2518, 2519, 2520, 2521, 2559, 2562,
 2563, 2584, 2596, 2760, 2832, 2905, 2916, 3033, 3047, 3152,
 3298, 3420, 3434, 3474, 3503, 3504, 3522, 3574, 3589.

B. Soil

1. General effects

178, 437, 763, 1184, 1221, 1678, 1698, 1710, 2133, 2231,
 2293, 2467, 2815, 2816, 2826, 3001, 3421, 3424.

2. High (above average), favoring infection and disease
63, 68, 122, 370, 734, 854, 992, 1133, 1163, 1167, 1168,
1184, 1319, 1320, 1560, 1680, 1696, 1699, 1707, 1799, 1875,
1986, 1992, 2287, 3256, 3330, 3566, 3567.
3. Low (below average), favoring infection and disease
641, 1181, 1680, 1684, 2067, 2392, 3240, 3479, 3480.
4. Cardinal temperatures for infection and disease development
320, 545, 565, 749, 753, 754, 756, 757, 758, 761, 793, 826,
838, 869, 887, 995, 996, 997, 1111, 1154, 1166, 1308, 1309,
1348, 1356, 1373, 1377, 1421, 1465, 1543, 1594, 1595, 1596,
1606, 1619, 1620, 1621, 1623, 1630, 1642, 1684, 1685, 1686,
1700, 1701, 1707, 1708, 1709, 1895, 1902, 1903, 1916, 1921,
1966, 1988, 2065, 2066, 2129, 2130, 2133, 2158, 2159, 2230,
2358, 2375, 2377, 2548, 2590, 2637, 2650, 2687, 2688, 2689,
2691, 2692, 2705, 3199, 3297, 3298, 3302, 3305, 3308, 3312,
3352, 3421, 3425, 3426, 3429, 3430, 3431, 3433, 3440, 3480,
3532, 3669, 3670, 3671, 3672, 3673.

C. Frost and low temperature injury

1, 33, 91, 134, 166, 186, 187, 188, 199, 208, 245, 247, 266,
275, 276, 288, 296, 367, 431, 458, 524, 531, 585, 591, 669,
673, 699, 707, 724, 726, 733, 738, 742, 743, 765, 798, 980,
994, 1059, 1164, 1171, 1173, 1216, 1253, 1268, 1313, 1314,
1325, 1335, 1354, 1387, 1389, 1390, 1395, 1414, 1428, 1528,
1532, 1535, 1632, 1702, 1703, 1714, 1715, 1718, 1759, 1798,
1801, 1845, 1931, 1932, 1979, 2001, 2033, 2062, 2077, 2084,
2103, 2205, 2217, 2221, 2224, 2265, 2277, 2278, 2279, 2281,
2317, 2322, 2323, 2325, 2326, 2343, 2354, 2409, 2419, 2434,
2453, 2482, 2490, 2495, 2508, 2621, 2635, 2666, 2675, 2680,
2754, 2779, 2831, 2843, 2865, 2874, 2894, 2896, 2929, 2975,
3038, 3058, 3069, 3070, 3071, 3072, 3074, 3075, 3079, 3080,
3081, 3117, 3149, 3157, 3342, 3354, 3355, 3384, 3411, 3412,
3413, 3448, 3460, 3469, 3485, 3508, 3536, 3538, 3577, 3614,
3616, 3639, 3652, 3661, 3675, 3686.

D. Winter injury

7, 132, 155, 185, 187, 255, 256, 302, 307, 308, 404, 424, 462,
525, 526, 537, 575, 583, 624, 661 672, 674, 799, 892, 897,
919, 946, 986, 1053, 1140, 1148, 1190, 1192, 1201, 1277,
1293, 1317, 1370, 1371, 1383, 1387, 1391, 1429, 1431, 1432,
1441, 1452, 1506, 1521, 1590, 1647, 1745, 1759, 1784, 1786,
1994, 1996, 1997, 2003, 2072, 2102, 2104, 2141, 2145, 2171,
2186, 2208, 2244, 2257, 2261, 2288, 2315, 2327, 2329, 2399,
2400, 2416, 2418, 2553, 2554, 2734, 2736, 2741, 2743, 2814,
2815, 2816, 2844, 2864, 2923, 2928, 2951, 3037, 3061, 3113,
3121, 3153, 3171, 3174, 3176, 3178, 3179, 3205, 3257, 3260,
3261, 3262, 3277, 3281, 3282, 3414, 3444, 3452, 3454, 3531,
3560, 3561, 3570, 3575, 3591.

XX. TIME FACTOR (Influence on viability, infectiveness, etc., of spores)

136, 167, 366, 373, 374, 377, 429, 507, 539, 718, 766, 789,
808, 822, 849, 876, 898, 907, 922, 947, 954, 960, 961, 1022,
1032, 1092, 1093, 1110, 1198, 1199, 1206, 1254, 1350, 1473,
1485, 1563, 1565, 1728, 1729, 1730, 1733, 1856, 1860, 2010,
2107, 2210, 2276, 2304, 2366, 2374, 2471, 2510, 2536, 2566,
2569, 2570, 2587, 2628, 2851, 3300, 3303, 3305, 3330, 3487,
3496, 3611, 3682.

XXI. TOXINS AND CHEMOTROPIC RESPONSES

335, 336, 337, 467, 503, 557, 558, 559, 633, 790, 812, 818,
851, 1022, 1040, 1107, 1225, 1226, 1227, 1299, 1341, 1352,
1369, 1458, 1468, 1539, 1602, 1717, 1776, 1826, 2013, 2035,
2036, 2100, 2251, 2310, 2488, 2506, 2676, 2738, 2987, 3122,
3123, 3126, 3193, 3332, 3347, 3653, 3682.

XXII. VENTILATION

A. Air drainage, etc.

257, 869, 884, 638, 645, 1417, 1546, 2299, 2447, 2774a,
2811, 2812, 3215, 3331, 3357, 3616.

B. Greenhouse and plant bed

400, 885, 2334, 2336, 2337, 2523, 2531, 2597, 3008, 3102,
3145, 3167, 3612, 3637.

C. STORAGES

172, 375, 376, 379, 380, 381, 504, 1370, 1525, 1670, 2022,
2098, 2299, 2373, 2519, 3047, 3474, 3497, 3522.

XXIII. WEATHER

General

12, 13, 14, 20, 23, 29, 58, 81, 90, 106, 113, 114, 131, 137,
138, 143, 151, 166, 169, 170, 177, 184, 195, 198, 201, 202,
240, 264, 274, 284, 292, 311, 321, 322, 334, 345, 384, 388,
421, 428, 440, 442, 447, 448, 449, 451, 454, 463, 471, 479,
485, 489, 506, 518, 519, 539, 566, 580, 581, 582, 583, 584,
587, 589, 594, 625, 628, 639, 642, 643, 660, 670, 677, 703,
707, 741, 743, 745, 750, 751, 759, 760, 761, 764, 767, 772,
783, 794, 796, 802, 805, 811, 832, 870, 877, 878, 881, 883,
884, 896, 900, 906, 920, 921, 941, 950, 953, 962, 964, 982,
1007, 1010, 1025, 1026, 1035, 1049, 1054, 1061, 1071, 1077,
1086, 1102, 1110, 1115, 1116, 1123, 1124, 1125, 1142, 1175,
1190, 1197, 1214, 1218, 1221, 1241, 1255, 1256, 1257, 1260,
1262, 1263, 1264, 1265, 1267, 1273, 1294, 1301, 1308, 1371,
1375, 1388, 1389, 1392, 1415, 1434, 1440, 1469, 1472, 1516,
1527, 1536, 1541, 1542, 1559, 1564, 1599, 1636, 1644, 1648,
1669, 1670, 1675, 1682, 1683, 1686, 1696, 1704, 1705, 1757,
1760, 1765, 1768, 1770, 1778, 1841, 1868, 1874, 1899, 1907,
1911, 1940, 1946, 1947, 1967, 1968, 1969, 1974, 2012, 2029,
2055, 2056, 2086, 2090, 2101, 2128, 2140, 2148, 2149, 2172,
2177, 2212, 2233, 2234, 2240, 2252, 2256, 2261, 2262, 2263,
2274, 2283, 2289, 2339, 2342, 2363, 2392, 2427, 2428, 2431,
2432, 2457, 2459, 2465, 2467, 2468, 2470, 2474, 2478, 2479,
2485, 2495, 2513, 2537, 2539, 2540, 2577, 2580, 2585, 2588,
2600, 2602, 2606, 2615, 2620, 2621, 2633, 2634, 2644, 2656,
2657, 2673, 2677, 2681, 2683, 2684, 2691, 2725, 2730, 2732,
2737, 2745, 2747, 2756, 2758, 2769, 2805, 2809, 2813, 2843,
2858, 2861, 2870, 2873, 2879, 2881, 2882, 2888, 2916, 2919,
2926, 2927, 2958, 2959, 2961, 2967, 2968, 2969, 3015, 3016,
3038, 3050, 3063, 3064, 3067, 3068, 3077, 3095, 3108, 3114,
3148, 3149, 3150, 3180, 3189, 3192, 3200, 3204, 3211, 3212,
3216, 3236, 3237, 3239, 3264, 3265, 3266, 3267, 3268, 3270,
3279, 3304, 3310, 3315, 3319, 3372, 3373, 3393, 3404, 3414,
3420, 3421, 3427, 3441, 3442, 3443, 3451, 3471, 3490, 3494,
3511, 3512, 3523, 3525, 3535, 3610, 3611, 3631, 3640, 3645,
3688.

XXIV. WIND, as an agent of:

A. Disease spread

25, 306, 579, 849, 881, 948, 949, 983, 1028, 1035, 1069,
1117, 1118, 1125, 1261, 1374, 1375, 1622, 1692, 1841, 1874,
2262, 2435, 2479, 2551, 3105, 3215, 3351, 3466, 3525, 3631,
3634, 3646, 3682.

B. Drying and cooling

110, 160, 207, 228, 293, 405, 543, 670, 962, 976, 1097, 1174,
1237, 1261, 1275, 1389, 1447, 1540, 1881, 1987, 1995, 2182,
2183, 2184, 2209, 2261, 2265, 2294, 2329, 2493, 2515, 2655,
2955, 2973, 3091, 3168, 3179, 3560, 3570.

C. Mechanical effect

426, 634, 684, 686, 768, 770, 976, 977, 1037, 1275, 1286,
1358, 1360, 1361, 1384, 1392, 1723, 1788, 2325, 2790, 2892,
2988, 3049, 3524, 3530, 3576, 3581.

HOST-DISEASE-INJURY INDEX

- ACTINOMYCES SPP.
2316
- ALFALFA (*Medicago sativa*)
Bacterial blight (*Pseudomonas medicaginis*)
2798
Bacterial root rot (*Aplanobacter insidiosum*)
1645, 1647, 2111
Frost blisters
2354
Leaf spot (*Pseudopeziza medicaginis*)
1641, 3150
White spot
2382, 2693, 2694
Wilt (*Fusarium oxysporum* var. *medicaginis*)
3507
Winter injury
1647, 3508
Yellow leaf blotch (*Pyrenopeziza medicaginis*)
1640
- ALTERNARIA SPP.
182, 289, 403, 789, 1381, 3323
- AMARYLLIS (*Amaryllis* sp.)
Phoma amaryllidis
1806
- AMORPHOPHALLUS CAMPANULATUS
Windburn
1097
- APPLE (*Malus sylvestris*)
Abscission
1392
Alkali injury
1506
Anthracnose (*Neofabraea malicorticis*)
649, 985, 1864
Bitter pit (stippen)
9, 66, 168, 380, 383, 472, 494a, 497, 498, 745, 899, 901, 902, 903, 1197, 1216, 1370, 1393, 1427, 1525, 1722, 1850, 2085, 2090, 2091, 2092, 2093, 2703, 3009, 3010, 3564, 3649,
Bitter rot (*Glomerella cingulata*)
372, 842, 1820, 2397, 2729, 2731, 2916, 3264
Black-end
168, 3618
Black rot (*Physalospora cydoniae*)
791, 1431, 2415, 2564, 3264
Blister
168, 987, 1370, 3155
Blister spot (*Pseudomonas papulans*)
2755
Blossom wilt (*Sclerotinia cinerea*)
305
Blotch (*Phyllosticta solitaria*)
1075, 1206, 1911, 2729, 2881, 2919, 3264
Brown bark spot
1370, 3230
Bud rot (*Fusarium fructigenum*?)
767
Cankers
(*Nectria* spp.)
3283, 3615
(*Nummularia discreta*)
48, 1144
(*Valsa* spp.)
389, 2586
Cedar rust (*Gymnosporangium juniperi-virginianae*)
13, 14, 583, 670, 1115, 1117, 1118, 1260, 1264, 2660, 2663, 2881
Chlorosis
436, 707, 2220, 3258
Collar rot
2003
Core rot
896
Cork
168, 987, 989, 2135, 2136, 2209
Cracking
492, 1160
Crinkle
168, 472, 2085, 2735
Crown gall (*Bacterium tumefaciens*)
1382, 2971, 3030
Dieback
2135, 2136
Drouth injury
2792
Drouth spot
168, 380, 382, 383, 987, 989, 1219, 2136, 2209
Fire blight (*Bacillus amylovorus*)
13, 365, 584, 676, 1169, 1263, 1264, 1636, 2200, 2393, 2644, 2661, 3156, 3258, 3264, 3556
Fish-eye rot (*Corticium centrifugum*)
452
Fruit pit
36, 985, 1910
Fruit spot (*Phoma pomi*)
14, 368
(*Sporotrichum malorum*)
1073
Hairy root (*Phytophthora rhizogenes*)
1382, 2710
Heat injury
1849
Internal browning and breakdown
151, 2373, 2758, 3295, 3474
Jonathan spot
9, 375, 380, 702, 1370, 2407, 2519
Leaf scorch
1488, 2885
Measles
70
Nitrate injury
1363, 1866
Oedema
123, 1370

- Powdery mildew (*Podosphaera leucotricha*)
14, 68, 150, 983, 984, 1950, 3407, 3414
- Pink rot (*Trichothecium roseum*)
780
- Punk
168, 989, 2662
- Rots (storage)
9, 195, 372, 374, 1501, 1502, 1531, 1754, 2883
- Rosette
1370, 1956, 2258, 2416
- Scab (*Venturia inequalis*)
12, 13, 14, 23, 194, 226, 321, 322, 334, 393, 462, 485, 539, 584, 791, 834, 985, 1027, 1028, 1469, 1526, 1527, 1583, 1680, 1681, 1684, 1689, 1690, 1704, 1705, 1728, 1729, 1730, 1732, 1733, 1734, 1955, 2059, 2086, 2245, 2256, 2300, 2428, 2431, 2732, 2880, 2881, 2882, 3016, 3148, 3414, 3442, 3525, 3589, 3665
- Scald
9, 10, 66, 371, 375, 376, 379, 380, 381, 498, 504, 985, 1291, 1370, 1525, 1670, 2401, 2516, 2519, 2520, 2559, 3047, 3574
- Skin crack
1370, 2662
- Soggy breakdown
498, 2516, 2517, 2518, 2521
- Spray injury
General
625, 1731, 1735, 1979, 2658, 3564
- Arsenicals
791, 828, 862, 901, 902, 1201, 1326, 1327, 1362, 1364, 1506, 1731, 3228
- Bordeaux and other copper sprays
193, 369, 455, 586, 677, 707, 791, 831, 886, 902, 941, 1370, 1911, 1939, 2079, 2416, 2532, 3149, 3441
- Lime sulfur and other sulfur sprays
707, 827, 828, 829, 882, 886, 941, 1012, 1137, 1370, 1529, 1911, 2049, 2079, 2917, 3407, 3441
- Oils
1137, 1743, 3667
- Sunscauld
1370
- Tan disease
1370
- Water core
380, 385, 472, 498, 588, 707, 988, 990, 1370, 1525, 2367, 2380
- Wind scorch
160
- Winter and frost injury
36, 369, 707, 798, 986, 1190, 1192, 1201, 1277, 1370, 1429, 1506, 1521, 1528, 1669, 1994, 1995, 1996, 2002, 2003, 2317, 2400, 2553, 2554, 3038, 3061, 3070, 3080, 3149, 3153, 3205, 3258, 3281, 3282, 3384, 3448, 3469, 3531, 3538, 3560, 3561
- Xylaria root rot (*Xylaria* sp.)
3633
- York spot
989
- APRICOT (*Prunus armeniaca*)
Chlorosis
2046
- Frost injury
1253
- Gummosis (*Bacterium cerasi*)
63
- Spray injury
1388
- Sunscauld
63
- ARTICHOKE, GLOBE (*Cynara scolymus*)
Root rot (*Rosellinia necatrix*)
2178
- Rot (*Botrytis* type)
1925
- ASCOCHYTA SP.
182
- ASCOMYCETES
907
- ASPARAGUS (*Asparagus officinalis*)
Rust (*Puccinia asparagi*)
105, 583, 584, 1260, 1261, 1262, 2435, 2642, 2989, 3041, 3042, 3183, 3184, 3186
- ASPERGILLUS SPP.
263, 557, 558, 598, 812, 1531, 1602, 2374, 2579, 2611, 2834, 3122, 3123, 3338, 3477
- ASTER (*Callistephus chinensis*)
Leaf spot (*Septoria callistephi*)
2311
- Stunt
3365
- Wilt (*Fusarium conglutinans callistephi*)
1570, 1707, 1708
- Yellows
785, 1707
- AVOCADO (*Persea americana*)
Chlorosis
1231
- Root rot (*Phytophthora cinnamomi*)
3361
- Tip and margin burn
1231
- BACTERIA (Plant pathogenic)
Hydrogen-ion influence
229, 1805
- Illuminating gas toxicity
1957
- Physiology
947, 2708, 2709, 3019, 3027, 3635
- BANANA (*Musa* sp.)
Anthracnose (*Gloeosporium musarum*)
3331
- Black-tip and leaf spot (*Cercospora* spp.)
751, 2384, 2984

- Blight
 2128
 Bunchy top
 1999
 Diseases, general
 2704
 Hail injury
 465
 Panama disease or wilt (*Fusarium cubense*)
 311, 3459
BARLEY (*Hordeum vulgare*)
 Bacterial blight (*Bacterium translucens*)
 1697
 Blight (*Helminthosporium teres*)
 145, 2629
 Chlorosis
 601
 Dwarf leaf rust (*Puccinia anomala*)
 390
 Mildew, powdery (*Erysiphe graminis*)
 836, 2645, 2810, 3099
 Potash deficiency
 1182
 Rust, stem (*Puccinia graminis*)
 1023, 1601
 Sclerotium fulvum
 2072
 Seed coat injury
 1547
 Smut, covered (*Ustilago hordei*)
 934, 1430, 1437, 2650, 2780, 3190
 Smut, loose (*Ustilago nuda*)
 85, 826, 1024, 1998, 2701
 Spot blotch (*Helminthosporium sativum*)
 836
 Stripe (*Helminthosporium gramineum*)
 760, 1598, 1684, 1757, 1903, 2348,
 2629, 2714
 Toxic materials
 Aluminum
 1331, 1467
 Arsenic
 336, 1227, 1975
 Boron
 336, 3402
 Calcium-magnesium
 111
 Copper
 335, 1929
 Hydrogen-ion
 1467
 Iron
 1330
 Manganese
 335, 3400
 Smelter waste and smoke
 773, 1929
 Sodium
 294, 295
 Zinc
 336
BASIDIOMYCETES
 970
- BEAN** (*Phaseolus* spp.)
 Anthracnose (*Colletotrichum lindemuthianum*)
 167, 843, 1260, 1854, 2289, 2851,
 3331
 Arsenical injury
 1029a
 Bacterial disease (*Phytophthora medicaginis* var. *phaseolicola*)
 439
 Bacterial spot (*Bacterium viridifaciens*)
 1078, 3310
 Bacterial wilt (*Bacterium flaccumfaciens*)
 1385, 1893, 1894
 Blight (*Bacterium phaseoli*)
 849, 1145, 1146, 1262, 2289, 2606
 Boron injury
 316, 623, 2328, 2993
 Chlorosis
 1120
 Frost blister
 245
 Leaf spot (*Phyllosticta phaseolina*?)
 1292
 Mildew, downy (*Phytophthora phaseoli*)
 582, 1260, 1261
 Mosaic
 924, 925
 Pod blight (*Diaporthe phaseolorum*)
 1299
 Potassium lack
 2922
 Root rot (*Fusarium martii* *phaseoli*)
 437, 438, 2637
 (*Pythium irregulare*)
 2190
 Stem rot (*Corticium vagum*)
 2692
 Sunscald
 1525, 1985, 1990, 1992
 Yeast spot (*Nematospora phaseoli*)
 3617
BEECH (*Fagus americana*)
 Spray injury
 625
BETT (*Beta vulgaris*)
 Alkali injury
 854
 Bacterial gummosis
 3068
 Bacterial pocket (*Bacterium beticola*)
 401
 Bacterium morulans
 287a
 Chlorosis
 93
 Cracking
 2591
 Curly top
 506, 507, 509, 510, 2959
 Frost blister
 245

- Galls (*Bacterium tumefaciens*)
1906
- Girth scab (*Actinomyces* spp.)
893
- Hail injury
3120
- Heart and dry rot
1450, 2414
- Iron injury
3118
- Leaf scorch
3147
- Leaf spot (*Bacterium aptatum*)
397
(*Cercospora beticola*)
34, 645, 650, 1846, 2535, 2536, 2876, 3337
- Lightning injury
2921
- Root rots (*Phoma betae* and other causes)
102, 271, 345, 642, 854, 890, 1056, 1104, 1105, 1106, 1181, 1200, 1821, 2044, 2227, 2607, 2642, 2690, 2697, 2990, 3154, 3689
- Rust (*Uromyces betae*)
3523
- Soil reaction relations
1193, 1200, 1819
- Yellow leaf (drouth)
3346
- BEGONIA** (*Begonia* sp.)
Crown gall (*Bacterium tumefaciens*)
3032
- BERSEEM** (*Trifolium alexandrinum*)
Stem rot (*Rhizoctonia solani*)
3245
- BETEL VINE** (*Piper betle*)
Phytophthora sp.
3287
- BLUEBERRY** (*Vaccinium* spp.)
Soil acidity relation
667
- BOTRYOSPORIUM SP.**
1589
- BOTRYTIS SPP.** (Chiefly *B. cinerea*)
55, 225, 366, 403, 557, 558, 789, 1563, 2247, 2374, 2456, 2463, 2579, 3036, 3477, 3511
- BOWLESIA SEPTENTRIONALES**
Bacterial disease (*Phytomonas bowlesia*)
1912
- BROAD BEAN** (*Vicia faba*)
Boron injury
338, 3470
- Streak (*Bacillus lathyri*)
2424
- BROMES** (*Bromus* spp.)
Bacterial disease (*Bacterium coronafaciens* var. *atropurpureum*)
2640
- Brown rust (*Puccinia dispersa*)
1023, 3461, 3463
- BUCKWHEAT** (*Fagopyron esculentum*)
Ascochyta fagopyrum
1854
- Soil reaction relation
503
- Zinc toxicity
613
- CABBAGE** (*Brassica oleracea*)
Black-leg (*Phoma lingam*)
570, 3422, 3435
- Black-rot (*Bacterium campestre*)
2788, 3026
- Club root (*Plasmodiophora brassicae*)
320, 333, 549, 551, 1195, 1680, 1681, 1918, 2230, 2231, 2232, 2314, 2642, 3144, 3348, 3523, 3601
- Diseases, general
1301, 3427
- Downy mildew (*Peronospora parasitica*)
552
- Hail injury
465
- Lightning injury
3427
- Malnutrition
3427
- Moor's head
83
- Ring-spot (*Mycosphaerella brassicicola*)
3504
- Spray injury (copper)
2895
- Tip burn
552
- Wire stem (*Corticium vagum*)
1184
- Yellows (*Fusarium congenitans*)
760, 1183, 1184, 1678, 1680, 1681, 1683, 1685, 1689, 1696, 2432, 3296, 3297, 3302, 3305, 3429, 3433
- CACAO** (*Theobroma cacao*)
Aspergillus halophilus
2834
- Bud rot (*Phytophthora faberi*)
698, 2672
- Collar crack (*Armillaria mellea*)
697
- CALADIUM** (*Caladium* sp.)
Gloeosporiose (*Gloeosporium aracearum*)
1397
- CANNA** (*Canna* sp.)
Bud rot (*Bacterium cannae*)
410
- CARAWAY** (*Carum carvi*)
Leaf disease (*Taphridium umbelliferarum*)
2202
- CARNATION** (*Dianthus caryophyllus*)
Gas injury
680
- Rust (*Uromyces caryophyllinus*)
2642, 2966, 3145, 3146
- Stem rot (*Corticium vagum*)
257, 1875, 2467

- Wilt (*Alternaria* sp.)
648
(*Fusarium* spp.)
241, 719, 3563
- CARROT (*Daucus carota*)
Black-rot (*Alternaria radicina*)
1856
Blight (*Macrosporium carotae*)
794
Crown rot (*Rhizoctonia* sp.)
3568
Leaf spot (*Cercospora apii carotae*)
794
Root rot (*Phoma sanguinolenta*)
2772
Soft rot (*Bacillus carotovorus*)
1282, 1283, 1672, 1673
- CASSAVA (*Manihot esculenta*)
Chlorosis
999
- CASTOR BEAN (*Ricinus communis*)
Fusarium ricini
3345
Gray mold (*Sclerotinia ricini*)
1153
- CAULIFLOWER (*Brassica oleracea*
botrytis)
Bacterial leaf spot (*Bacterium maculicolum*)
2107
Black-leg (*Phoma lingam*)
570
Black-rot (*Bacterium campestre*)
573
Leaf scorch
3147
Leaf spot (*Alternaria* spp.)
3503, 3506
Mildew (*Peronospora parasitica*)
2581
Rhizoctonia
3374
Spray injury (copper)
2893
- CELERY (*Apium graveolens*)
Black heart
3621
Blight, early (*Cercospora apii*)
713, 810, 813, 815a, 1016, 1056a,
1057, 1779, 2747, 3335, 3613
Blight, late (*Septoria apii*)
470, 810, 993, 1016, 1764, 1818,
3213, 3280, 3284, 3523, 3613, 3665
Frost blister
245
Heart rot (*Bacillus carotovorus*)
1868
Phoma rot (*Phoma apicola*)
214
Pink rot (*Sclerotinia libertiana*)
2636
Root rot (*Rhizoctonia* sp.)
3373
- Seeding, premature
3116, 3288
- CELOSIA CRISTATA
Fusarium celosiae
5
- CEPHALOTHECIUM SP.
182
- CERCOSPORA SP.
1381
- CEREALS, general
Arsenic injury
2444, 2878
Bright speck
1712a
Diseases, general
447, 760, 3189, 3202, 3267
Foot rots (*Helminthosporium* spp.)
800, 1715, 2348, 2495
Frost injury
980, 1414
Fusarium blights (*Fusarium* spp.)
113, 538, 1420, 1965, 2848, 3350
Glassy kernel
1241
Hail injury
2859, 2874
Lack of soil aeration
32
Lodging
1525, 1813, 2715
Mildews (various)
94, 2646, 2718, 2719, 2907, 2907a
Potassium starvation
1271, 1942
Rusts (*Puccinia* spp.)
25, 284, 319, 351, 488, 605, 660, 772,
806, 870, 877, 878, 879, 1007, 1009,
1025, 1032, 1046, 1088, 1089, 1090,
1092, 1093, 1214, 1412, 1416, 1417,
1454, 1628, 1768, 1874, 2040, 2041,
2088, 2155, 2238, 2252, 2331, 2435,
2442, 2469, 2470, 2471, 2472, 2495,
2642, 2774, 2774a, 2776, 2819, 2846,
2853, 2906, 2958, 2976, 3063, 3064,
3077, 3104, 3110, 3472
Seedling blight (*Gibberella saubinetii*)
761, 1681, 3428
Septoria diseases (*Septoria* spp.)
3488, 3489
Smuts (various)
84, 86, 351, 1091, 1430, 1592, 1769,
1778, 1822, 2369, 2739, 2871, 3103,
3233
Soil acidity
689, 1959, 2364
Soil exhaustion
2721
Take-all (*Ophiobolus* spp.)
169, 218, 356, 690, 781, 1210, 1328,
1394, 1438, 1499, 2018, 2157, 2737,
2850

- Winter and frost injury
 1715, 1745, 2814, 2815, 2831, 2874,
 3081
 Yellow-spot
 1414
 Yellow-tip
 1712a
- CHEERRIES** (*Prunus* spp.)
 Brown rot (*Sclerotinia* sp.)
 384, 1264
 General
 1355
 Leaf scorch
 3147
 Leaf scorch (*Gnomonia erythrostoma*)
 2283
 Leaf spot
 1148, 1260, 1680, 1732, 1734, 2428,
 3663
 Smoke injury
 3271
 Spray injury
 Arsenicals
 1147, 1148
 Bordeaux
 827, 831, 3663
 Winter and frost injury
 591, 1148, 1391, 2102, 2103, 2244,
 2734, 2736, 3070, 3079, 3538
- CHESTNUT** (*Castanea dentata*)
 Blight (*Endothia parasitica*)
 60, 1374, 1376, 2964, 3134, 3135,
 3209, 3419, 3453
 Chlorosis
 731
 Sunscauld
 2558
- CHLORELLA** SP.
 Hydrogen-ion relations
 1493, 1494, 3458
- CHRYSANTHEMUM** (*Chrysanthemum* sp.)
 Septoriose (*Septoria chrysanthemella*)
 1404
- CINERARIA** (*Senecio cruentus*)
 Cyanide injury
 1248, 1977
- CITRUS** (*Citrus* spp.)
 Alkali injury
 1742, 1953, 2631
 Bacterial spot (*Bacillus citrimaculans*)
 777
 Blast (*Bacterium* sp.)
 962, 1472, 1879, 3014
 Blight (*Phytophthora faberi*)
 2379
 Boron injury
 402, 1740, 3234
 Brown rot (*Pythiacystis citrophthora*)
 489
 (*Phytophthora hibernalis*)
 220, 491
- Canker (*Bacterium citri*)
 776, 1951, 1952, 2466, 2468, 2474,
 2476, 3491
 Cement dust injury
 2445
 Chlorosis and mottle-leaf
 149, 348, 349, 433, 706, 1002, 1232,
 1233, 1234, 1236, 1237, 1446, 2494,
 2665, 3057
 Deuterophoma tracheiphila
 2501
 Die-back—Exanthema
 454, 464, 536, 602, 706, 1000, 1001,
 1003, 1927, 2096, 2750, 3131, 3235
 Diseases, general
 963, 3142
 Freezing injury
 602, 2084, 2205, 3485, 3616
 Fruit rot (*Penicillium* sp.)
 960, 961, 3242, 3525
 Gas injury
 1159
 Gummosis
 454, 606, 3045
 Internal decline
 2669
 June drop
 1471, 1586, 3224
 Lightning injury
 3132, 3418
 Limestone injury
 1002, 1004
 Mal di gomma (foot rot)
 1537, 3142, 3235
 Melanose (*Phomopsis citri*)
 431, 951, 1000, 1005, 2750, 3130,
 3620
 Nematospore coryli
 955
 Oil injury
 363, 740, 1780, 3626, 3627
 Powdery mildew (*Oidium tingitanium*)
 508
 Rots, general
 1043, 2837, 2838, 3307
 Scab (*Cladosporium citri*)
 952, 2473, 2475, 2476, 3131, 3235,
 3331, 3619
 Sodium salts (injury)
 2176
 Soil acidity relations
 1038
 Spray injury
 74, 363, 740, 2750
 Stem-end rot (*Diplodia natalensis*)
 950, 951, 952, 1005
 Sunscauld
 2750
 Water injury
 430, 2684
 Wilt
 2682, 2684

- Wind injury
 634, 2182, 2183, 2184, 2655, 3049
 Withertip (*Colletotrichum gloeosporioides*)
 166, 706, 2749
CLADOSPORIUM SPP.
 157, 1350
CLOVERS (*Trifolium* spp.)
 Anthracnose (*Colletotrichum trifolii* and
 Gloeosporium caulivorum)
 1041, 1074, 2233, 2432, 2513, 3526
 Blight (*Brachysporium trifolii*)
 285, 286
 Hypochnus centrifugus
 872
 Leaf spot (*Bacterium trifoliorum*)
 1688
 (*Macrosporium sarcinaeforme*)
 1808
 (*Pseudopeziza trifolii*)
 1641
 Mosaic
 1610
 Potassium starvation
 965, 3601
 Rust (*Uromyces trifolii*)
 1523
 Soil depletion
 969
 Stem rot (*Sclerotinia trifoliorum*)
 42
 Toxic materials
 Aluminum
 2782
 General
 467
 Iron
 2782
 Manganese
 3565
 Winter injury
 1452
COCONUT PALM (*Cocos nucifera*)
 Bud rot (*Bacillus coli*)
 1635, 2952
 (*Phytophthora* spp.)
 2672, 2920, 3860
 Lightning injury
 2952, 2953, 2954
 Root diseases
 2449
COFFEE (*Coffea arabica*)
 Flower virescence
 675
 General
 918, 2115
 Leaf spot (*Amphalia flavida*)
 532, 3124
 Rosellinia bunodes
 3331
 Sclerotium coffeicolum
 3124
COLLETOTRICHUM SPP.
 182, 535, 1867, 3322
- CONIFERS, general**
 Armillaria mellea
 725
 Blue stain (*Ceratostomella* spp.)
 1873
 Chlorosis
 1800
 Damping-off (various organisms)
 1119, 1278, 1324, 3090
 Electrical injury
 3353
 Heat injury
 144
 Mistletoe (*Phorodendron juniperinum*)
 3513
 Needle blight
 1434
 Nursery blight (*Phomopsis juniperovora*)
 1249
 Oxygen lack around roots
 1435
 Root rot, seedling
 1187
 Rots (*Lenzites* spp.)
 927
 (*Merulius* spp.)
 928
 Rust (*Melampsora pinitorqua*)
 1312
 Smoke injury
 179, 2322, 2785, 3578
 Soil reaction and root fungi
 2175, 3516
 Winter and frost injury
 297, 1053, 1318, 1325, 1845, 2288,
 2315, 2322, 2680, 3180, 3260, 3355,
 3452
CONIOTHYRIUM SP.
 1563
CORN, Maize (*Zea mays*)
 Bacterial spot (*Pseudomonas holci*)
 1748, 2708, 2709
 Black bundle (*Cephalosporium*
 acremonium)
 1478
 Blotch- leaf
 871
 Chlorosis
 782, 1120, 1121, 2080
 Cob-rot (*Basisporium gallarum*)
 825, 2167
 Dry rot (*Diplodia macrospora*)
 839
 (*Diplodia zeae*)
 75, 440, 567, 571, 823, 824, 1477
 1478, 1594, 2166, 2170, 2433, 2590,
 3392
 Ear-rot (*Diplodia frumenti*)
 840
 Fungi, general
 31
 Hail injury and disease
 816

- Helminthosporium diseases
 (Helminthosporium spp.)
 2351, 2352
 Magnesium deficiency (chlorosis)
 1652, 1654
 Mildews (Sclerospora spp.)
 2173, 3542
 Penicillium injury (Penicillium sp.)
 1593
 Physoderma disease (Physoderma zeae-
 maydis)
 3314, 3315, 3316
 Pythium seedling blight (Pythium sp.)
 1595, 1596
 Rot, ear and seed (Fusarium moniliforme)
 1478, 1916, 2028, 3532
 Rot, stalk (Phytomonas dissolvens)
 2762, 2763
 Rust (Puccinia sorghi)
 3486, 3487
 Seedling blight and root rot (Gibberella
 saubinettii)
 82, 389, 753, 754, 755, 756, 757, 758,
 760, 761, 764, 838, 1195, 1478, 1560,
 1680, 1686, 1687, 1690, 3532
 (Helminthosporium sp.)
 3199
 Smut (Ustilago zeae)
 108, 594, 826, 1221, 1459, 1478,
 1559, 1639, 1835, 1984, 2432, 2510,
 2526, 2527, 2551, 2552, 3143, 3318
 Spot disease (Helminthosporium maydis)
 2351
 Stewart's disease (Aplanobacter
 stewartii)
 1478, 2601
 Toxic materials
 Aluminum
 3, 98, 1474, 1475
 Arsenic
 647, 1785
 Borax
 252, 316, 612, 614, 620, 1785, 2328,
 2993
 Copper
 647, 1785
 General
 467, 1226, 1369
 Hydrogen-ion
 3244
 Iron
 98, 647, 1474, 1475
 Manganese
 1739
 Zinc
 647
 CORTICIUM PRATICOLA
 1803
 COTTON (Gossypium hirsutum)
 Alkali injury
 517
 Angular leaf spot (Bacterium
 malvacearum)
 395, 396, 948, 949, 973, 1125, 2065,
 2067, 2744, 3194, 3195, 3196
 Anthracnose (Glomerella gossypii)
 163, 264, 265, 1123, 1888
 Arsenical injury
 3011
 Boll shedding
 121, 164, 832, 1937
 Boll-rot (Diplodia gossypina)
 832
 Borax injury
 250, 2992
 Crazy top
 1762
 Crinkle
 3651
 Leaf blights
 120
 Leaf roll
 1648
 Leaf, boll, and bract spot
 (Helminthosporium gossypii)
 3359
 Lightning injury
 1693
 Nematospores coryli
 955
 Root rot (Chiefly Phymatotrichum
 omnivorum)
 914, 915, 916, 917, 1760, 1761, 2427,
 2477, 2642, 2963, 3248, 3252, 3253,
 3254, 3255
 Rust
 119, 265, 832, 1195
 Seedling blight (Colletotrichum sp.)
 3223
 Soil moisture excess
 154
 Sore-shin (Corticium vagum)
 68, 152, 153, 2066, 2448, 3439, 3440
 Yellow leaf
 2370
 COTTONWOOD (Populus sp.)
 Chlorosis
 819
 COWPEA (Vigna sinensis)
 Bacterial spot (Bacterium viridifaciens)
 1078
 Powdery mildew (Erysiphe polygoni)
 392
 Sunburn
 1113
 CRANBERRY (Vaccinium macrocarpon)
 End rot (Fusicoccum putrefaciens)
 2962, 3137
 False blossom
 2961
 Heat injury
 669
 Oxygen and carbon dioxide relations
 223, 2965, 3415

- Red leaf spot (*Exobasidium vaccinii*)
140, 2961
- Storage rots
3139
- CRESS (*Lepidium sativum*)
Damping-off (*Corticium vagum* and
Pythium debaryanum)
1399
- CRUCIFERS, general
Bacterial spot (*Bacterium vesicatorium*
raphani)
3562
- Black-leg (*Phoma lingam*)
570, 572, 3573
- Black-rot (*Bacterium campestre*)
3026
- Club root (*Plasmodiophora brassicae*)
549, 551, 2057, 3529
- Mosaic
574
- White rust (*Cystopus candidus*)
2378
- CRYPTOMERIA JAPONICA
Heartwood rot (*Fomes ulmarius*)
1403
- CUCUMBER (*Cucumis sativus*)
Angular leaf spot (*Bacterium lachrymans*)
505, 2708, 2709, 3031
- Bacterial wilt (*Bacillus tracheiphilus*)
3017, 3026
- Bordeaux injury
3490
- Cyanide injury
457, 1207
- Damping-off (*Pythium* sp.)
3603
- Diseases, general
3490
- Downy mildew (*Pseudoperonospora*
cubensis)
580, 1460, 1829, 3146
- Leaf spot (*Stemphylium cucurbitacearum*)
2404
- Margin injury
1183
- Mosaic
785, 1616, 3438
- Scab (*Cladosporium cucumerinum*)
783
- Yellow pickle
3291
- CUCURBITS, general
Anthracnose (*Colletotrichum lagenarium*)
1068
- Blight (*Macrosporium cucumerinum*)
350
- Downy mildew (*Pseudoperonospora*
cubensis)
580, 1939, 2927
- Leaf blight
3211
- Mosaic
784
- Powdery mildew (*Erysiphe*
cichoracearum)
730
- Rot (*Sclerotium rolfsii*)
2767
- Soft rot (*Bacillus melonis*)
1114
- CURRENT (*Ribes* spp.)
Frost injury
3639
- Leaf scorch
2885, 2886
- CYCLAMEN (*Cyclamen* sp.)
Root rot (*Thielavia basicola*)
3065
- CYLINDROSPORIUM SP.
182
- CYSTOPUS SP.
183
- DAMPING-OFF FUNGI
General
2667
- Corticium vagum*
1321
- Fusarium moniliforme*
1321
- Phytophthora* spp.
2450
- Pythium debaryanum*
124, 1321, 1603, 2592
- Rhizoctonia* spp.
1603, 2450
- DERMATIUM PULLULANS
216
- DEWBERRY (*Rubus* sp.)
Fungus attack and winter injury
537
- DIPLODIA NATALENSIS
952, 954
- DISEASES, general
24, 219, 249, 317, 1010, 1372, 1525,
1963, 2265, 2266, 2330, 2412, 2492,
2642, 3266, 3462
- DOUGLAS FIR (*Pseudotsuga douglasii*)
Frost injury
726
- Parch blight
2294
- Rot (*Sphaeropsis ellisii*)
2439
- DOWNY MILDEWS
General
582, 2249, 3278, 3601
- Cystopus* spp.
1255, 2161
- Peronospora* spp.
1255, 1256, 1566, 2803, 3611
- Pythiacystis citrophthora*
952, 954
- Phytophthora* spp.
182, 952, 2304
- Plasmopora viticola*
1566, 2627

- EGGPLANT (*Solanum melongena*)
 Blight (*Phomopsis vexans*)
 851, 2057, 2058
 Rot (*Phytophthora terrestris*)
 1747
 Wilt (*Verticillium albo-atrum*)
 76, 1243
- ELM (*Ulmus* spp.)
 Diseases, general
 1081
 Poison gas injury
 1177
 Winter injury
 2844
- ELODEA (*Elodea canadensis*)
 Copper injury
 3341
- ENDOTHIA PARASITICA
 633
- EROTIUM REPENS
 1775
- ERYSIPHEAE
 1840, 2845
- EUCALYPTUS SP.
 Drouth injury
 1863
- EUONYMUS (*Euonymus japonicus*)
 Mildew (*Oidium euonymi-japonicae*)
 2811
- EUPHORBIA SPP.
 Rust (*Uromyces* spp.)
 200, 3301
- EVENING PRIMROSE (*Oenothera* sp.)
 Mildew (*Erysiphe polygoni*)
 2246
- EXOASCUS SPP.
 2210, 2211
- FIR (*Abies* spp.)
 Heat injury
 189
 Lightning injury
 2912
 Winter and frost injury
 2894
- FLAX (*Linum usitatissimum*)
 Anthracnose (*Colletotrichum lini*)
 3323
 Heat canker
 1390, 1525, 2639
 Pasm (Phylactaena linicola)
 341
 Root rot (*Rhizoctonia* sp.)
 340
 Rust (*Melampsora lini*)
 1294
 Wilt (*Fusarium lini*)
 45, 283, 362, 760, 1680, 1689, 1709,
 2151, 3812, 3813, 3423
- FOXTAIL (*Chaetochloa lutescens*)
 Bacterial disease (*Pseudomonas
 alboprecipitans*)
 2761
- Rust (*Puccinia perplexans*)
 2819
- FRUIT TREES, general
 Alkali injury
 1371
 Calcium and potassium starvation
 2020
 Cement dust injury
 52, 53
 Chlorosis
 206, 515, 710, 1716, 2011, 2722,
 2723, 3449, 3456
 Crown rot
 1202
 Diseases, general
 20, 1433
 European canker (*Nectria galligena*)
 3679
 Frost cracking
 3074
 Fruit dropping
 741, 743
 Fruit setting
 1389
 Gumming
 1439
 Hail injury
 1723, 2280, 2872, 3403
 Leaf scorch
 161, 2484, 2655, 3333, 3445, 3446
 Potassium injury
 560
 Smoke injury
 1804, 2272
 Soil moisture relations
 435, 1079
 Spray injury
 Arsenicals
 147, 148, 971, 972, 1758, 2823, 3229,
 3231, 3664
 Bordeaux
 291, 2657, 3559, 3666
 General
 170, 292, 1371, 1428
 Lime-sulfur
 292, 463, 3666
 Oils
 441, 739, 968, 3406
 Sunscald
 307, 2208
 (Also see winter injury)
 Wind injury
 1723
 Winter and frost injury
 33, 139, 155, 255, 256, 307, 308, 309,
 404, 462, 486, 525, 526, 575, 672,
 674, 742, 799, 892, 897, 1371, 1429,
 1718, 1759, 1784, 1786, 1994, 1995,
 1997, 2208, 2257, 2279, 2281, 2327,
 2399, 2409, 2419, 2635, 2843, 2864,
 2928, 3538, 3591

FUMAGO VAGANS

1011

FUNGI, general

Ecological relations

184, 809, 2365, 2544, 2805, 3328,
3338, 3410, 3681

General relations

789, 926, 1069, 1776, 1899, 3133,
3351

Hydrogen-ion relations

2833, 2979

Light relations

1252

Moisture and temperature relations

974, 979, 1776, 3128, 3138, 3496,
3523

Nutritional factors

1776, 1837, 1972

Response to toxins

192, 557, 558, 559, 631, 632, 790,
1040, 1539, 1797, 1957, 3126, 3653,
3662

Soil composition and reaction

2514, 3417

FUSARIUM SPP.

182, 403, 1602, 1897, 1909, 1960,
2009, 2213, 2318, 2767, 2848, 2915,
2979, 3252, 3259, 3321, 3322, 3477,
3563, 3636, 3637GARLIC (*Allium sativum*)*Helminthosporium allii*

469

GERANIUM (*Pelargonium* sp.)Bacterial disease (*Bacterium erodii*)

1911a

Leaf spot (*Bacterium pelargoni*)

400

Stem rot (*Pythium complectens*)

313

GIBBERELLA SAUBINETII

1489, 1960

GINSENG (*Panax quinquefolium*)

Diseases, general

3372, 3557, 3558

GLADIOLUS (*Gladiolus* sp.)Bacterial blight (*Bacterium gummisudans*)

2109

Corm rot (*Penicillium gladioli*)

2113, 2114

Dry rot (*Sclerotium gladioli*)

2064

Fusarium rot (*Fusarium oxysporum* var. *gladioli*)

2063

Leaf spot (*Bacterium marginatum*)

2110

GLOEOSPORIUM SPP.

1396, 1398, 2071, 2884

GLOMERELLA SPP.

182, 844, 845

GLYCERIA NERVATA

Epichloe typhina

209

GOOSEBERRY (*Ribes* sp.)Mildew (*Sphaerotheca mors-uvae*)

2524, 2812

Spray injury

2049

GRAPE (*Vitis* spp.)Anthracnose (*Gloeosporium ampelophagum*)

71

Arsenic injury

2863

Black rot (*Guignardia bidwellii*)482, 521, 813, 853, 1260, 2577, 2612,
2634, 2642, 2899, 3386, 3391

Blight

923

Bordeaux injury

2623, 2624

California vine disease

2511

Chlorosis

127, 158, 484, 522, 553, 655, 694,
736, 920, 932, 964, 1141, 1508, 1823,
1838, 1878, 2102, 2225, 2408, 2561,
2615, 2626, 2683, 3388, 3393

Court-noué (Short node)

190, 211, 442, 531, 1101, 2621, 2720,
3087, 3389

Diseases, general

656, 3387

Drouth injury

2619

Gray mold rot (*Botrytis cinerea*)

732, 1195, 1876

Hail injury

2280, 2620, 2683

Leaf roll

2499

Leaf spot

769

Lightning injury

2609, 2625, 2638, 2683

Melanose

2308

Mildew, downy (*Plasmopora viticola*)88, 128, 212, 459, 460, 461, 479, 480,
481, 514, 583, 921, 1110, 1142, 1564,
1565, 1566, 1568, 1853, 2148, 2177,
2428, 2431, 2440, 2452, 2585, 2613,
2614, 2617, 2627, 2668, 2845, 2873,
3212, 3237, 3405, 3523Mildew, powdery (*Uncinula necator*)128, 1142, 1567, 1571, 1848, 2431,
2803, 2804, 2873, 3523, 3658*Physalospora baccae*

2345

Pseudopeziza tracheiphila

3680

Rogean

3086

Root rots, general

453

Rosellina necatrix

1067

- Shelling (Coulure)
1940, 2459, 2616, 2683, 3212, 3240
- Shrivel
244, 453
- Smoke injury
466, 1553
- Spray injury
2307
- Stunting
1139
- Sun injuries
242, 2618, 2683
- White rot (*Coniothyrium diplodiella*)
921, 2620
- Winter and frost injury
994, 1140, 2224, 2281, 2326, 2409,
2490, 2864, 2865
- GRASSES
- Brown patch (*Rhizoctonia* sp.)
746, 2234, 2235
- Epichloe typhina*
1271, 3393
- Gas injury
1344
- Manganese injury
1224
- Take-all (*Ophiobolus cariceti*)
1765
- GYMNOSPORANGIUM CLAVICEPS
739
- HELMINTHOSPORIUM SPP.
544, 1254, 1627, 2344, 2347
- HOLLYGRAPE (*Mahonia aquifolium*)
Rusts (*Puccinia graminis* and *P. mirabilissima*)
1270
- HOLLYHOCK (*Althaea rosea*)
Rust (*Puccinia malvacearum*)
260, 261, 1262, 1264
- HOP (*Humulus lupulus*)
Leaf roll
1771
- Mildew (*Pseudoperonospora humuli*)
89, 262, 422, 2711
(*Sphaerotheca humuli*)
2813
- HORSE RADISH (*Radicula armoracia*)
Leaf spot (*Bacterium campestre* var. *armoraciae*)
2112
- HYACINTH (*Hyacinthus orientalis*)
Yellow rot (*Pseudomonas hyacinthi*)
3377
- HYPOCREACEAE (*Nectria* and *Neocosmospora*)
Physiology
1814
- INDIGO (*Indigofera* sp.)
Water injury
1520
- Wilt
715, 1515
- IRIS (*Iris* sp.)
Leaf blotch (*Heterosporium gracile*)
2593
- Leaf spot (*Didymellina iridis*)
3303
- Rhizome rot (*Bacillus carotovorus*)
2696
- JUTE (*Corchorus* sp.)
Rhizoctonia
445, 975
- KALE (*Brassica oleraceae acephala*)
Lightning injury
1677
- Tumors
62
- KUDZU VINE (*Pueraria hirsuta*)
Halo spot (*Bacterium puerariae*)
1386
- LARCH (*Larix* sp.)
Canker (*Dasyscypha willkommii*)
445, 930, 1055, 1444, 2525
- Heart rot (*Fomes annosus*)
1444
- Needle cast (*Lophodermium laricinum*)
3512
- LARKSPUR (*Delphinium* sp.)
Bacterial leaf spot (*Bacterium delphinii*)
411, 3021
- Crown rot (*Sclerotium delphinii*)
3241
- LEGUMES
- Bacterial diseases (*Pseudomonas* spp.)
2027
- Downy mildew (*Peronospora trifoliorum*)
2171a, 2454
- Frost injury
980
- Hydrogen-ion relations
3383, 3397
- Manganese toxicity
904, 1739
- Root diseases
1513
- Sodium chloride injury
1410
- LEMON (*Citrus limonia*)
Alternaria rot (*Alternaria* sp.)
175, 606
- Boron injury
1468
- Die-back
1926
- Internal decline
173, 174, 176, 177
- Mal secco (*Colletotrichum gloeosporioides*)
2496, 2497, 2498
- Stem-end decay (*Phomopsis californica*)
135
- Sulfate injury
1238

- LETTUCE** (*Lactuca sativa*)
 Anthrachnose (*Marssonina panattoniana*)
 310
 Bacterial blight (*Bacterium marginale*)
 399
 Bacterial disease (*Bacterium viridillividium*)
 398
 Bacteriosis
 2422
 Botrytis rot (*Botrytis cinerea*)
 2463, 2597
 Carbon dioxide injury
 2372
 Chlorosis
 1120, 1121
 Downy mildew (*Bremia lactuca*)
 885, 2038, 2195, 3523
 Drop (*Sclerotinia* sp.)
 197, 1836, 2968, 3129, 3185, 3493
 Root-knot (*Heterodera radicola*)
 2335
 Rosette (*Aplanobacter rhizoctonia*)
 3285
 Rot
 1080
 Soil reaction relation
 3517
 Soil salt excess
 615
 Tipburn
 1877, 2123, 2333, 3181, 3289
 Wilt (*Bacterium vitians*)
 399
LILAC (*Syringa vulgaris*)
 Blight (*Bacterium syringae*)
 412
LILY (*Lilium* spp.)
 Black scale
 2383
 Botrytis rot
 1725
 Root rot
 3641
 Soft rot (*Bacillus* sp.)
 3336
LOBELIA (*Lobelia* sp.)
 Rhizoctonosis (*Rhizoctonia solani*)
 3272
LUPINE (*Lupinus* sp.)
 Chlorosis
 2180, 2671
 Toxic materials
 Aluminum
 2991
 Boron
 1717
 Copper
 1717, 3347
 Iron
 2991
MALLOW (*Hibiscus ventifolius*)
 Intumescences
 700
MANGO (*Mangifera indica*)
 Anthrachnose (*Colletotrichum gloeosporioides*)
 2140
 Bacterial disease (*Bacillus mangifera*)
 774
MAPLE (*Acer* spp.)
 Leaf scorch
 3147
 Oil spray injury
 359
MILLET (*Paspalum scrobiculatum*)
 Kodra smut (*Sorosporium paspali*)
 2153, 2836
MILLET (*Setaria* spp.)
 Downy mildew (*Sclerospora graminicola*)
 1461, 1463, 1464, 1465, 2173
MILLET, PROSO (*Panicum miliaceum*)
 Bactereial disease (*Bacterium panici*)
 864
 Magnesium lack
 1971
MINT (*Mentha* spp.)
 Rust (*Puccinia menthae*)
 298, 1558
MISTLETOE (*Phorodendron juniperinum*)
 Smelter injury
 1948
MONASCUS SPP.
 3660
MONILIA SPP.
 366, 1563, 1826
MONILIOPSIS ADERHOLDI
 1576
MOSAICS
 527
MOUNTAIN LAUREL (*Kalmia latifolia*)
 Leaf blight (*Phomopsis kalmiae*)
 874
MUCOR SPP.
 263, 366, 820, 1245, 1602, 1891, 2579
MULBERRY (*Morus* sp.)
 Blight (*Bacterium mori*)
 97, 775, 3025
 Canker (*Nectria cinnabarina*)
 97
 Mildew (*Phyllactinia corylea*)
 1380
 Rust (*Aecidium mori*)
 1380
MUSHROOM (*Agaricus campestris*)
 Mycogene pernicioso
 1842, 3035
MYXOMYCETES
 618
NASTURTIUM (*Tropaeolum majus*)
 Leaf spot (*Bacterium aptatum*)
 397

Wilt (<i>Bacterium solanacearum</i>)	Copper
409	647
NEMATODE (<i>Heterodera</i> spp.)	Iron
1154, 1155, 2335, 2483	647, 2487
NYMPHAEA SPP. (Pond lilies)	Manganese
Leaf spot (<i>Helicosporium nymphaeum</i>)	2821, 2867
2599	Zinc
OAK (<i>Quercus</i> spp.)	613, 647
Chlorosis	White wilt
1082	495
Frost injury	Yellow leaf
199, 591, 1314	3290
Mildew (<i>Microsphaera</i> spp.)	OLEANDER (<i>Nerium oleander</i>)
929, 1844, 2436, 2717, 2997	Bacteriosis (<i>Pseudomonas savastanoi</i> var. <i>nerii</i>)
OAT (<i>Avena sativa</i>)	3013
Acidity disease	OLIVE (<i>Olea europea</i>)
1913, 2034	Knot (<i>Bacterium savastanoi</i>)
Blade blight (<i>Pseudomonas avenae</i>)	2839, 2868, 3022, 3023
2025	Leaf spot (<i>Ascochyta olea</i>)
Blight	2493
2101	(<i>Cycloconium oleaginum</i>)
Chlorosis	1008, 2491, 2493
2713, 3605	Sunscald
Dry spot	1865
1449	Toxic materials
Gas injury	43, 2488
2887	ONION (<i>Allium cepa</i>)
Halo blight (<i>Bacterium coronafaciens</i>)	Black stem rot (<i>Macrosporium parasiticum</i>)
863, 2708, 2709	848, 3273, 3331
Leaf-speck and grey speck	Blast
72, 77, 561, 562, 563, 1416, 1453,	1666
1533, 1534, 2699, 2821, 2822, 2867,	Bulb rot (<i>Fusarium cepae</i>)
2869, 3376, 3650	3298, 3434
Leaf spot (<i>Helminthosporium avenae</i>)	(<i>Fusarium zonatum</i>)
2610	2426
Lodging	Chlorosis
2271	1121
Powdery mildew (<i>Erysiphe graminis</i>)	Disease, general
2647	3420
Reclamation disease	Lightning injury
72, 77	2298
Rust, general	Mildew (<i>Peronospora schleideni</i>)
1584, 2271, 2457, 2774a	2305, 2973, 3331, 3555
Rust, crown (<i>Puccinia coronata</i>)	Neck rot (<i>Botrytis allii</i>)
1601, 2168, 2503	3426
Rust, leaf (<i>Puccinia graminis</i>)	Pink root (<i>Fusarium</i> sp.)
1161, 1601, 2432	2980, 3256
Seedling blight (<i>Fusarium culmorum</i>)	(<i>Phoma terrestris</i>)
2986	1276
Smut, general	Purple blotch (<i>Macrosporium porri</i>)
318, 1264, 2159, 2338, 2432	61
Smut, covered (<i>Ustilago levis</i>)	Smudge (<i>Colletotrichum circinans</i>)
826, 1188, 1630, 2650, 2652, 3339	3421, 3432
Smut, loose (<i>Ustilago avenae</i>)	Smut (<i>Urocystis cepulae</i>)
178, 826, 1430, 1630, 1637, 1638,	54, 389, 1680, 1681, 1686, 3430.
2925, 3352	3431, 3436, 3437
Stripe blight (<i>Bacterium striafaciens</i>)	Soil reaction relation
866	3517
Take-all (<i>Ophiobolus</i> sp.)	White rot (<i>Sclerotium cepivorum</i>)
1189	3424, 3425
Toxic materials	
Arsenic	
647	

- ONION, Welsh (*Allium fistulosum*)
Downy mildew (*Peronospora schleideni*)
1466
- OOMYCETES
657
- OPHIOPOLUS GRAMINIS
General
3076
Hydrogen-ion concentration and growth
3482
Oxygen and carbon dioxide relations
966, 967
- ORANGE (*Citrus sinensis*)
Cement dust injury
2461
Chlorosis
2201
Crinkle
496
Die-back
354, 494, 2201, 2801, 3366, 3483
Frost injury
1354
Fruit shedding
597
Gumming
1006
June drop
288, 595, 596, 3484
Nutritional factors
2664
Root rot
2840, 3483
Rots, general
1755
Splitting
468
Spray injury
Lime-sulfur
3112
Oil
3627
- PACHYSANDRA (*Pachysandra terminalis*)
Volutella pachysandrae
1557
- PALM (*Phoenicaceae*)
Band disease
1157
Bronze leaf wilt
352, 353
- PARSLEY (*Petroselinum hortense*)
Wilt (*Bacillus melliae*)
3527
- PASSION VINE (*Passiflora edulis*)
Brown spot (*Macrosporium* sp.)
2985
- PEA (*Pisum* spp.)
Anthracnose (*Colletotrichum pisi*)
1646
Arsenic injury
1029a
- Bacterial disease (*Pseudomonas seminum*)
520
Black leaf (*Fusicladium pisicola*)
1920
Blight
2443
Boron injury
1507, 2310
Lack of nutrients
720, 721, 2822, 3060
Leaf spot (*Ascochyta pisi*)
1958, 2557
Lime-magnesium injury
111
Mosaic
1610
Root rot (*Aphanomyces euteiches*)
1242, 1643, 1644, 1690
(*Pythium irregulare*)
2190
Soil reaction relations
3517
Stem blight (*Pseudomonas pisi*)
2799
Stem rot (*Corticium vagum*)
2692
Sunscald
2557
Toxic materials
1369
Wilt (*Fusarium* spp.)
1642, 1921, 2152, 2370
- PEACH (*Amygdalus persica*)
Bacterial spot (*Bacterium pruni*)
13, 14, 583, 1195, 2728, 2733, 3020,
3264
Brown rot (*Sclerotinia fructicola*)
14, 582, 982, 1582, 2730, 2918, 3525
Chlorosis
1228
Crown gall (*Bacterium tumefaciens*)
3239
Drop
3454
Leaf curl (*Exoascus deformans*)
811, 1260, 1264, 2210, 2212, 2435,
2512, 2924, 2926, 3239, 3264, 3270,
3414, 3443, 3525
Leaf yellowing
1511, 2924
(See root aeration)
Little peach
258, 462
Mildew (*Sphaerotheca pannosa*)
3559
Root aeration
1512, 1513, 2270
Root rot
2924
Rots, general
378
Scab (*Cladosporium carpophilum*)
14, 47, 1727, 2730, 2918

- Sooty mold (*Fumago vagans*)
931
- Spray injury
 Arsenicals
 73, 215, 586, 830, 1244, 1432, 3232, 3455
 Bordeaux and other copper sprays
 41, 141, 142, 455, 559, 941, 1204, 1388
 Lime-sulfur
 586, 941, 2917
 Oils
 359
 Sunscald
 2743
 Toxic materials
 2105
 Transit rot (*Rhizopus nigricans*)
 982
 Valsa canker (*Valsa* sp.)
 3324, 3325, 3326
 Winter and frost injury
 7, 15, 673, 1191, 1213, 1432, 1632, 2102, 2400, 2418, 2743, 2924, 3037, 3210, 3277, 3412, 3413, 3538, 3575
 Yellows
 258, 462, 3015
- PEANUT (*Arachis hypogaea*)
 Heat injury
 1322
- PEAR (*Pyrus communis*)
 Black blister (*Taphrina bullata*)
 1049
 Black-end
 1426
 Blue mold (*Penicillium expansum*)
 66
 Chlorosis
 66, 1409
 Fire blight
 462, 676, 778, 1195, 1257, 1505, 1636, 2102, 3239
 Frost belting
 1216
 Heat injury
 1849
 Leaf scorch
 2102, 3153
 Scab (*Venturia pyrina*)
 21, 991, 1955, 3525
 Spray injury
 193
 Winter injury
 3412, 3560, 3561, 3661
- PECAN (*Hicoria pecan*)
 Anthracnose (*Glomerella cingulata*)
 2598
 Brown leaf-spot (*Cercospora fusca*)
 2598
 Die-back (*Botryosphaeria berengeriana*)
 2145
 Kernel spot (*Coniothyrium caryogenum*)
 2598
- Leaf blotch (*Mycosphaerella dendroides*)
735
- Nursery blight (*Phyllosticta caryae*)
2598
- Rosette
2143, 2144, 2145, 2425, 2600, 2994, 3476
- Sandburn
734
- Scab (*Fusicladium effusum*)
251, 429, 2362, 2363
- Tip-burn
2145
- Winter injury
1491, 2141, 2145
- PENICILLIUM SPP. (Chiefly *P. glaucum*)
366, 557, 558, 1602, 1900, 2047, 2374, 2579, 2979, 3300, 3338, 3477, 3590
- PEONY (*Paeonia* sp.)
 Blight (*Phytophthora paeoniae*)
 646
- PEPPER (*Capsicum annum*)
 Bacterial spot (*Bacterium vesicatorium*)
 1071, 1077, 2969
 Blossom-end rot
 1440
 Damping-off (*Rhizoctonia* sp.)
 1440
 Die-back (*Vermicularia capsici*)
 709
 Fruit rot (*Phytophthora terrestris*)
 1747
 Storage rot (*Botrytis cinerea*)
 1862, 2463
 Sunburn
 1440
 Wilt (*Fusarium* sp.)
 70, 1196, 1895
- PERONOSPORALES
1967, 3367, 3610
- PETUNIA (*Petunia hybrida*)
 Botrytis injury
 184a
- PHOMA BETAE
981, 2044
- PHOMOPSIS CITRI
952
- PHYCOMYCES NITENS
3320
- PHYCOMYCETES
789
- PHYLACTAENA LINICOLA
2740
- PHYLLOSTICTA SP.
1381
- PHYSALOSPORA RHODINA
2760
- PINE (*Pinus* spp.)
 Blight
 367, 2603

- Blister rust (*Cronartium ribicola*)
303, 2187, 3050, 3053, 3054, 3089,
3091, 3093, 3095, 3096
- Blue stain (*Ceratostomella* spp.)
599, 1839
- Canker (*Dasyctypha fusco—sanguinea*)
3158
- Hail injury
1914
- Needle blight
946, 2223
- Needle cast (*Lophodermium pinastri*)
3512
- Rot (*Polyporus orientalis*)
1405
- Rust (*Melampsora pinitorqua*)
1312, 3236
- Slash decay (various organisms)
3094
- Smoke injury
861, 2785, 3055
- Sun scorch
3168, 3171
- Winter and frost injury
208, 738, 1239, 2261
- PINEAPPLE (*Ananas sativus*)
- Aluminum toxicity
2977
- Brown spot (*Bacillus ananas*)
2931
- Chlorosis
627, 1126, 1127, 1624, 1625, 1626,
1738, 1739, 2116, 3349, 3540, 3541,
3593
- Root rots (*Fusarium* spp.)
2117, 2997
- Storage diseases
712
- Top rot
3349
- Toxic materials
- Manganese
1624, 1625, 1626, 1737, 1738, 1739,
3540, 3541, 3593
- Water blister (*Theilaviopsis paradoxa*)
752
- PLASMIDIOPHORA BRASSICAE
3528
- PLENODOMUS FUSCOMACULANS
638
- PLUM (*Prunus* spp.)
- Blight (*Bacillus amylovorus*)
1674
- Brown rot (*Sclerotinia fructicola*)
384, 1939, 3423
- Chlorosis
2046
- Cladosporium sp.
221
- Gumming
1387
- Nutrition
3390
- Root rot
1067
- Shot hole (*Claustrosporium carpophilum*)
2820
- Spray injury
- Arsenate
1147
- Bordeaux
559, 811, 1388
- Sunscauld
537, 2102
- Winter injury
537, 2244
- Wither tip (*Monilia cinerea*)
305
- POMEGRANATE (*Punica granatum*)
- Fruit splitting
1470
- Nematospora coryli
955
- POPPY (*Papaver* spp.)
- Bacterial blight (*Bacterium papavericola*)
417
- Mildew (*Peronospora arborescens*)
3659
- Pleospora disease (*Helminthosporium papaveri*)
546
- Soft rot (*Bacillus papaveris*)
130
- POTATO (*Solanum tuberosum*)
- Arsenical injury
1061, 1669, 1712
- Bacterial leaf disease (*Bacillus tubifex*)
701
- Bacterial ringspot (*Bacterium sepedonicum*)
3115
- Bacterial wilt (*Bacillus solanacearum*)
3018
- Blackheart
28, 171, 172, 217, 716, 748, 1164,
1217, 1525, 2022, 3152
- Black leg (*Bacillus phytophthorus*)
1185, 1869, 1870, 2263, 2271, 2303,
2423, 2769, 2950, 3024, 3097
- Blueing
3379, 3520
- Borax injury
252, 816, 620, 2264, 2328, 2993
- Bruise
1500
- Copper injury
622, 3062
- Crinkle
1617, 1872
- Curly dwarf
821, 1167, 2396
- Diseases, general
306, 651, 992, 1058, 1061, 1185,
1815, 1816, 1901, 2089, 2196
- Drouth injury
2578

- Dry rot (*Fusarium tubivorum*)
 3592
 Early blight (*Alternaria solani*)
 643, 1185, 1186, 1669, 2261, 2396,
 2602, 3085, 3264
 Frost necrosis and injury
 276, 748, 1164, 1702, 1752, 1801,
 1802, 1987, 3652
 Glassy end
 2478
 Gravy eye
 3473
 Heat necrosis
 1588
 Heat rot
 28
 Hollow heart
 1164, 2240, 2241, 2242, 2243
 Internal browning
 63, 114, 168, 748, 1190, 1216, 3520
 Iron injury
 3118
 Late blight and tuber rot (*Phytophthora*
 infestans)
 68, 407, 408, 581, 582, 639, 643, 708,
 813, 815, 880, 883, 884, 1013, 1103,
 1185, 1190, 1195, 1257, 1260, 1261,
 1378, 1580, 1591, 1605, 1608, 1668,
 1669, 1675, 1682, 1692, 1704, 1851,
 1852, 1945, 1946, 1947, 1968, 2055,
 2068, 2089, 2162, 2164, 2165, 2261,
 2282, 2276, 2303, 2392, 2396, 2397,
 2432, 2458, 2485, 2661, 2845, 2870,
 2927, 2930, 3180, 3189, 3206, 3331,
 3371, 3395, 3409, 3523, 3601, 3638,
 3640
 Leaf blotch (*Cercospora concors*)
 1706
 Leaf fleck
 420
 Leaf roll
 87, 659, 1180, 1580, 1617, 1872,
 1924, 2181, 2303, 2305a, 2860, 2862,
 3192, 3293
 Leaf yellowing
 2862
 Leak (*Pythium debaryanum*)
 1353
 Lightning injury
 1693, 3117a, 3640
 Lime-sulfur injury
 2296, 2297, 2800, 3151
 Magnesium lack
 1971
 Mosaic
 456, 659, 730a, 747, 1026, 1165,
 1168, 1580, 1610, 1611, 1617, 1687,
 1872, 1924, 1989, 2303, 3329, 3330,
 3668
 Net necrosis
 748
 Physiological relations
 2095
 Potash hunger
 238, 299, 300, 2889
 Powdery scab (*Spongospora subterranea*)
 129, 2163, 2172, 2594
 Pseudonet necrosis
 2584
 Root rot (*Rhizoctonia violaceae*)
 2852
 Rots, general
 27, 80, 346, 582, 1556, 2172, 2909
 Rusty spot
 2911
 Scab (*Actinomyces scabies*)
 279, 583, 610, 635, 640, 1131, 1132,
 1185, 1190, 1195, 1258, 1691, 1699,
 1700, 1701, 1768, 1970, 1991, 2052,
 2053, 2054, 2056, 2057, 2197, 2261,
 2583, 2825, 2826, 2827, 2944, 3146,
 3348, 3416, 3544, 3545, 3547, 3548,
 3549
 Scurf and stem rot (*Corticium vagum* var.
 solani)
 703, 1185, 1580, 1679, 1684, 1991,
 2417, 2447, 2464, 2687, 2688, 2689,
 2691, 2742
 Silver scurf (*Spondylocadium atrovirens*)
 2905
 Soft rot (*Bacillus solanisaprus*)
 1290
 Spindle tuber
 1167, 1168, 3533, 3534
 Sprain
 2582
 Sprouting
 1753
 Sunburn
 1116
 Tip burn
 583, 1061, 1116, 1156, 1164, 1525,
 1669, 1969, 2396
 Violet root rot (*Rhizoctonia crocorum*)
 933
 Wart (*Synchytrium endobioticum*)
 389, 511, 688, 695, 887, 888, 889,
 891, 1149, 1150, 1456, 2556, 2852,
 3519, 3521
 Wet rots
 3114, 3497
 Wilt and rot (*Fusarium* spp.)
 28, 246, 498a, 855, 1162, 1163, 1166,
 1348, 1678, 1922, 1923, 1949, 1986,
 1988, 1991, 1993, 2024, 2026, 2396,
 2562, 2563, 2875, 3033, 3522, 3640
 Wilt (*Verticillium albo-atrum*)
 855, 1185, 2396
 Yellow dwarf
 1168
 POWDERY MILDEWS
 General
 2642, 3414
 Erysiphe spp.
 267, 1269, 2641, 3381

- Oidium* spp
 421, 2803, 2804
Phyllactinia corylea
 1269, 3404a
PRIMULA (*Primula obconica*)
 Root rot (*Thielavia basicola*)
 3376
PROTEA CYNAROIDES
 Bacterial leaf spot (*Pseudomonas proteomaculans*)
 2424a
PSEUDOMONAS SPP.
 523, 2290, 3019
PYTHIUM SPP.
 500, 3252
QUINCE (*Cydonia oblonga*)
 Blight (*Bacillus amylovorus*)
 1636
RADISH (*Raphanus sativus*)
 Black root (*Aphanomyces raphani*)
 1749
 Rust (*Cystopus candidus*)
 3523
RHIZOCTONIA SPP.
 427, 2069, 2070, 2237, 2275, 2447,
 2448, 3252
RHIZOPUS SPP.
 406, 598, 817, 1281, 1305, 1306,
 2374, 2802, 3410, 3647, 3654
RHODODENDRON (*Rhododendron* sp.)
 Soil acidity relation
 668
 Wilt (*Phytophthora cinnamomi*)
 2058, 3571
RHUBARB (*Rheum rhaponticum*)
 Crown rot (*Phytophthora cactorum*)
 198
 Foot rot (*Phytophthora parasitica* var.
rhei)
 1152
 Frost blister
 245
RICE (*Oryza sativa*)
 Aluminum toxicity
 2214, 3394
 Bacterial leaf blight (*Pseudomonas oryzae*)
 1561
 Bakanae disease (*Lisea fujikuroi*)
 1830
 Blast (*Piricularia oryzae*)
 6, 1400, 1402, 1828, 2185, 2313,
 2346, 3220, 3225
 Blight (*Helminthosporium oryzae*)
 2349, 2350, 2375, 2376, 2377
 Brusone disease
 361, 944
 Chlorosis
 1128, 2189, 3606, 3607
 Foot rot (*Corticium* spp.)
 1406
 (*Ophiobolus miyabeanus*)
 3225
 Hydrogen-ion effect
 2207
 "Imochi" disease
 2215
 Seedling diseases (*Hyphomycetes*)
 2074
 Seedling rot (*Achyla prolifera*)
 4, 1401
 Stem rot (*Sclerotium* spp.)
 1406, 2677, 3362
 Straightthead
 2956, 3317
 Toxic materials
 1227, 2214
ROSE (*Rosa* spp.)
 Asphalt fume injury
 38, 39
 Diseases, general
 3471
 Lightning injury
 3098
 Mildew (*Peronospora sparsa*)
 68, 2531
RUBBER TREE (*Hevea brasiliensis*)
 Black stripe (*Phytophthora* spp.)
 2150, 3197
 Diseases, general
 3515
 Leaf fall
 2149
 Leaf scorch
 227
 Mildew (*Oidium heveae*)
 204a
 Potash starvation
 227
 Sunscorch
 2951
RUBUS SPP.
 Anthracnose (*Plectodiscella veneta*)
 1190, 1667
 Chlorosis
 66
 Mosaic
 750, 3594
 Orange rust, (*Gymnoconia interstitialis*)
 584, 1264, 1827
 Winter injury
 1018, 2171
RUSTS
 General
 107, 137, 184, 413, 434, 446, 589,
 766, 787, 789, 790, 877, 881, 900,
 978, 1458, 1773, 2004, 2013, 2014,
 2076, 2087, 2248, 2439, 2642, 2774a,
 2776, 2846, 2861, 3203, 3414, 3451,
 3601
 Cronartium ribicola (Pine blister rust)
 787, 808, 3093
 Gymnosporangium spp. (Cedar rusts)
 637, 787, 1039, 3502

- Puccinia antirrhini* (Snapdragon rust)
 787, 788
Puccinia chrysanthemi (Chrysanthemum rust)
 1112
Puccinia coronata (Oat rust)
 822, 881, 1473, 2004, 2686, 2774a
Puccinia dispersa (Rye and certain other grasses)
 487, 881, 2004, 2774a, 3465, 3466
Puccinia graminis (Stem rust of various cereals)
 204, 766, 881, 900, 1094, 2004, 2570, 2686, 2774, 3105, 3109
Puccinia malvacearum (Hollyhock rust)
 766, 787, 789, 2738
Puccinia pimpinellae
 1569
Puccinia polygoni (Polygonum rust)
 2004
Puccinia sorghi (Corn rust)
 2004, 2686
Uromyces caryophyllinus (Carnation rust)
 787
Uromyces pisi (Pea rust)
 3125, 3301
Uromyces trifolii (Clover rust)
 2004
RYE (*Secale cereale*)
 Diseases, general
 3189
 Ergot (*Claviceps purpurea*)
 1766
 Leaf spot
 2228
 Lodging
 2271
 Reclamation disease
 72
 Rust (*Puccinia* spp.)
 1093, 2271, 2774a, 2775
 Soil acidity disease
 3376
 Toxic materials
 Aluminum
 1332
 Boron
 623
 Gas
 2685
 Iron
 1330
 Winter injury
 1452, 2900
SAFFRON (*Crocus sativus*)
 Rot (*Bacillus croci*)
 2216
SAL (*Shorea robusta*)
 Lack of soil aeration
 1483, 1484
SANTOL (*Sandoricum koetjape*)
 Blight (*Phytophthora phaseoli*)
 555
- SAPROLEGNIA** SP.
 1915
SCLEROTINIA SPP.
 Acids and growth
 818
 General
 159, 182, 686, 789, 913, 1522, 2596, 2642, 3493, 3677
 Hydrogen-ion concentration and growth
 912, 3677
 Temperature
 541
SCLEROTIUM ROLFSSII
 1442, 2465, 3247, 3252
SEPTORIA APII
 2686
SERVICEBERRY (*Amelanchier* sp.)
 Witches' broom (*Dimerosporium collinsii*)
 3100
SESAME (*Sesamum indicum*)
 Black rot (*Bacterium sesami*)
 1807, 2312
 White silk disease (*Hypochnus centrifugus*)
 3656
SISAL (*Agave rigida*)
 Chlorosis
 3111
 Leaf spot (heat)
 314
SMUTS
 General
 434
 Tilletia spp.
 2587
 Ustilago spp.
 579, 718, 2007, 2528
SNAPDRAGON (*Antirrhinum majus*)
 Bacterial leaf spot (*Pseudomonas antirrhini*)
 3243
 Leaf spot (*Phyllosticta antirrhini*)
 1208, 3008
 Rust (*Puccinia antirrhini*)
 788, 2006, 3572
 Seedling rot (*Pythium spinosum*)
 2842
SOLANACEAE
 1746
SORGHUM (*Holcus* spp.)
 Bacterial disease (*Bacterium sorghi*)
 3031a
 Rust (*Puccinia sorghi*)
 2686, 3040
 Streak disease (*Bacterium holcola*)
 867
 Stripe disease (*Bacterium andropogoni*)
 868
 Smut, head (*Sorosporium reilianum*)
 545, 2550, 2648
 Smut, kernel (*Sphacelotheca sorghi*)
 1824, 1825, 2650, 2651, 2652, 2653

- SOYBEAN (*Soja max*)
 Bacterial blight (*Bacterium glycineum*)
 593
 Bacterial pustule (*Bacterium phaseoli*)
 3632
 Boron injury
 600, 1507
 Chlorosis
 2021, 2048, 2781, 2908, 3604, 3605
 Deficient nutrition
 1135, 2021
 Frog-eye (*Cercospora diazu*)
 1889
 Fusarium blight (*Fusarium tracheiphilum*)
 682
 Hydrogen-ion relations
 3244
 Mosaic
 1610
 Pod blight (*Diaporthe sojae*)
 1887, 2835
 Purple speck (*Cercosporina kikuchii*)
 2073
 Soil acidity relations
 503
 Sunburn
 1113
 SPHAEROPSIDALES
 182, 644, 1896, 1904
 SPINACH (*Spinacia oleracea*)
 Boron injury
 2310
 Chlorosis
 1120, 2137
 Downy mildew (*Peronospora effusa*)
 1462
 Leaf spot (*Heterosporium variabile*)
 2656, 2659
 Wilt (*Fusarium solani*)
 3250
 SPRUCE (*Picea* spp.)
 Armillaria mellea
 725, 1482
 Blue stain (*Ceratostomella pini*)
 1839
 Damping-off (various organisms)
 51
 Decay (*Trametes serialis*)
 512
 Drouth injury
 1482
 Heat injury
 189
 Rust (*Chrysomyxa rhododendri*)
 654
 Stem girdle
 1799
 Sunscorch
 1482
 Winter and frost injury
 296, 726, 2323
 SQUASH (*Curcubita maxima*)
 Bacterial leaf spot (*Bacterium cucurbitae*)
 414
 Storage diseases
 691
 STERIGMATOCYSTIS SPP.
 366, 2374
 STONE FRUITS
 Brown rot (*Sclerotinia* spp.)
 2580, 2756
 Gum flow (*Clausterosporium carpophilum*)
 22
 Gummosis (*Pseudomonas cerasus*)
 165
 Leaf spot (*Bacterium pruni*)
 2745
 Rots, general
 377, 2756
 Soil diseases
 692
 Spray injury
 2756
 Storage rots
 40, 898
 STRAWBERRY (*Fragaria* sp.)
 Asphalt fume injury
 38
 Black root (*Rhizoctonia* sp.)
 641
 Diplodina lycopersici
 3000, 3002, 3004
 Flooding injury
 312
 Leaf blights
 77, 3628
 Leather rot (*Phytophthora cactorum*)
 312, 2757, 2759
 Mildew (*Sphaerotheca humuli*)
 2809
 Root disease (*Pythium* sp.)
 3467, 3468
 Yellows or Xanthosis
 2522
 STREPTOTHRIS SPP.
 2316
 SUGAR CANE (*Saccharum officinarum*)
 Bacterial stripe (*Phytoplasma rubrisulbicans*)
 547
 Brown stripe (*Helminthosporium stenospilum*)
 938
 "Can disease"
 243
 Chlorosis and Pahala blight
 2, 801, 936, 1128, 1129, 1886, 2120,
 2122, 2332, 2370
 Degeneration
 652, 653
 Eye-spot (*Helminthosporium sacchari*)
 628, 629, 630, 1272, 1881, 1883,
 1885, 2050

- Gumming disease (*Bacterium vascularum*) 2366
 Gummosis 532
 Hail injury 465
 Lahaina disease 1279, 1880
 Leaf burn 1882
 Lightning injury 277, 3141
 Lodging 802, 1510
 Malnutrition 1279, 1329
 Red rot (*Colletotrichum falcatum*) 444, 846, 1516, 3368
 Red stripe (*Bacterium panici*) 1884
 Root diseases, general 554, 852, 937, 940, 1719
 Root rots (*Marasmius sacchari*) 2370, 3159
 (*Pythium* spp.) 499, 500, 995, 996, 997
 Storage rots 2832
 Toxic elements 2118
- SUNFLOWER *Helianthus annuus*)
 Rust (*Puccinia helianthi*) 136, 1874
 Wilt (*Sclerotinia libertiana*) 1902, 3669
- SWEET ALYSSUM (*Alyssum odoratum*)
 Rhizoctonia disease (*Rhizoctonia solani*) 3294
- SWEET CLOVER (*Melilotus* sp.)
 Root disease (*Plenodomus meliloti*) 728
- SWEET PEA (*Lathyrus odorata*)
 Bud drop 394
- SWEET POTATO (*Ipomoea batatas*)
 Black rot (*Ceratostomella fimbriata*) 1307, 1308, 1855
 Diseases, general 2098
 Dry rot (*Diaporthe batatatis*) 1300
 Fasciation 617
 Foot rot (*Plenodomus destruens*) 1296
 Mosaic 1311
 Pox (*Cystospora batata*) 1258, 2539
 Scurf (*Monilochaetes infuscans*) 1297, 2538, 2542, 3246
- Soft rot (*Rhizopus* spp.) 1303, 1304, 1858, 1859, 1860, 1861, 3509
 Soil rot (*Actinomyces* sp.) 11, 16, 17, 18, 2030
 Stem rot (*Fusarium* spp.) 1309
 Storage rots 1302
- SYCAMORE (*Platanus* sp.)
 Blight (*Gnomonia veneta*) 355, 482
 Frost injury 2896
 Giant leaf spot (*Gnomonia pseudoplatani*) 3358
- TEA (*Thea sinensis*)
 Brown blight (*Glomerella cingulata*) 3363
 Leaf scorch 227
 Red root (*Poria hypolateritia*) 1051
 Red rust (*Cephalerosus virescens*) 2023
 Root rot (*Botryodiplodia theobromae*) 1050, 1052, 3364
 (*Rhizoctonia bataticola*) 1050
 Rot (*Armillaria mellea*) 450
- THAMNIDIUM ELEGANS 133
- TIMBER-DESTROYING FUNGI
 General 3052
 Armillaria mellea 3450
 Coniophora cerebella 2154
 Fomes spp. 50, 1031, 2154, 2897, 3051, 3056, 3514
 Lenzites spp. 1031, 2154, 3051, 3450, 3477
 Merulius spp. 2154, 2192
 Polyporus spp. 1031, 3450, 3514
 Polystictus spp. 1457, 3450
 Poria incrassata 1538
 Trametes spp. 3051, 3056
- TIMOTHY (*Phleum pratense*)
 Potassium starvation 965
 Rust (*Puccinia poculiformis*) 1597
 Smut (*Ustilago striaeformis*) 717, 2408

- TOBACCO (*Nicotiana tabacum*)
- Aluminum injury
1653
 - Angular leaf spot (*Bacterium angulatum*)
1084, 1035
 - Bacterial leaf disease (*Phytophthora*
polycolor)
556
 - Bacterial leaf spot (*Bacterium melleum*)
1612, 2841
 - Blackfire (Physiological)
1497
 - Black root rot (*Thielavia basicola*)
56, 59, 213, 347, 609, 760, 792, 793,
1122, 1195, 1509, 1619, 1620, 1621,
1650, 1651, 1679, 1680, 1689, 2012,
3428
 - Black rot (*Sterigmatocystis nigra*)
1604
 - Black shank (*Phytophthora nicotianae*)
3279, 3304, 3306, 3308
 - Boron deficiency
2147
 - Boron toxicity
3227
 - Brown root rot
1623, 1650, 1651
 - Calcium deficiency
1083, 2146, 2253
 - Frenching
78, 1495, 1498, 1630, 2253, 3369,
3370
 - Hail injury
465
 - Leaf wither
1535
 - Magnesium deficiency
1613, 1933, 2146, 2306
 - Malnutrition
57, 1083, 1349, 2253
 - Manganese injury
1572
 - Mildew (*Peronospora* sp.)
3331
 - Mosaic
35, 205, 529, 530, 747, 749, 1026,
1485, 1542, 1605, 1607, 1614, 1616,
1794, 1795, 1941, 2078, 2132, 2284,
3035a, 3216, 3643
 - Oil injury
1618
 - Phosphorus deficiency
2253
 - Potash starvation
1195, 1535, 1613, 2146, 2253, 2306
 - Ring-spot
2569, 3039
 - Sand drown
1083, 1084, 1085, 1195, 1613, 2306
 - White mold (*Erysiphe cichoracearum*)
1496
 - Wild fire (*Bacterium tabacum*)
58, 319, 587, 1035, 1605, 1607, 1622,
1805, 2708, 2709, 3304, 3375, 3631,
3634
 - Wilt (*Bacterium solanacearum*)
99, 1086
(*Fusarium oxysporum nicotianae*)
1606
- TOMATO (*Lycopersicon esculentum*)
- Bacterial canker (*Aplanobacter*
michiganense)
415, 416, 1805, 2708, 2709, 3115
 - Bacterial spot (*Bacterium vesicatorium*)
779, 1076, 1077, 3494
 - Black mold rot (*Rhizopus nigricans*)
3647
 - Black spot or fruit rot (*Macrosporium* sp.)
704
(*Phoma destructiva*)
1575, 2967, 3494
 - Blight
2391
 - Blossom drop
1536, 2588, 2746, 2748, 3494
 - Blossom-end rot
138, 370, 493, 584, 705, 1116, 1525,
1536, 2126, 2679, 3034, 3173, 3207,
3208, 3251, 3494, 3495
 - Blotchy ripening
236
 - Boron relations
1633, 1634
 - Brown rot (*Bacterium solanacearum*)
3375
 - Buckeye rot (*Phytophthora terrestris*)
2768
 - Chlorosis
2199, 2822, 2891
 - Collar rot (various organisms)
2571
 - Crown gall (*Bacterium tumefaciens*)
2705, 2706, 2707
 - Cyanide injury
1207
 - Damping-off (various organisms)
231, 1747, 3603
 - Diseases, general
2537
 - Downy mildew (*Phytophthora infestans*)
2654, 3494
 - Early blight (*Alternaria solani*)
2967
 - Fern leaf
2218
 - Foot rot (*Rhizoctonia solani*)
234, 2999, 3001, 3494
 - Fruit blister
835
 - Fruit rot (*Basisporium gallarum*)
2595
 - Fruit spot (*Melanconium* sp.)
3311

- Hail injury
 465
 Hollow stem
 1586, 2748
 Isaria rot (*Isaria clonostachoides*)
 2573
 Leaf curl
 2748
 Leaf mold (*Cladosporium fulvum*)
 234, 1072, 1350, 2010, 2060, 2334,
 2386, 2337, 2523, 3003, 3005, 3006,
 3007, 3102, 3173, 3180, 3612
 Leaf spot (*Septoria lycopersici*)
 626, 2106, 2368, 2572, 2575, 2576,
 3102
 Mosaic
 235, 301, 343, 344, 584, 1610, 2103,
 3438
 Nematode (*Heterodera radicola*)
 2335, 3173
 Oedema
 122, 3173
 Potash lack
 1579
 Root rot (*Thielavia basicola*)
 3603
 Soil rot (*Rhizoctonia* sp.)
 3494
 Southern blight (*Sclerotium rolfsii*)
 3494
 Stemphylium leaf spot (*Stemphylium* sp.)
 3492
 Stripe and streak
 786, 1581, 1649, 2421, 3380, 3601
 Sunscald
 358, 626, 1338, 3173, 3494
 Toxic salts
 615, 2411
 Water-rot (*Oospora lactis*)
 2574
 Western yellow blight
 1407, 1540, 2945, 2946, 2947, 2948,
 2949
 Wilt (*Fusarium lycopersici*)
 565, 568, 569, 847, 850, 869, 1356,
 1357, 1536, 1678, 1679, 1680, 2724,
 2913, 2914, 2915, 3251, 3494, 3495,
 3566, 3567, 3569
 (*Verticillium albo-atrum*)
 232, 233, 234, 3602
 Winter blight
 3188
TREES—Shade and forest
 Chlorosis
 69, 96, 1724, 2795
 Diseases, general
 624, 1062, 1315, 2198, 2325, 2604
 Drouth, injury
 624, 1323, 1532, 3176
 Electrical injuries
 681, 1316, 1711, 1980, 2250, 2325,
 2529, 3165, 3169, 3172, 3177, 3182,
 3257
 Fungi, general
 125, 2514, 3204
 Hail injury
 92, 1487, 2509, 3198
 Ice and snow injury
 210, 770, 2741, 2923, 2955
 Illuminating gas injury
 132, 259, 357, 624, 858, 860, 1036,
 2186, 3169, 3172, 3178, 3182, 3257,
 3498
 Leaf scorch
 132
 Leaf shedding
 1724
 Little leaf
 3043
 Nitrate injury
 1363
 Oil injury
 359, 3178
 Rot (*Armillaria mellea*)
 727
 (*Fomes pinicola*)
 2268
 Smoke injury
 179, 259, 624, 1036, 1109, 1578,
 1804, 2186, 2324, 3160, 3178, 3257
 Soil aeration lack
 273, 1481, 2016, 2017, 2186, 2752
 Starvation
 30, 132
 Sunscald
 1320, 1336, 3172, 3176, 3178, 3180
 Tar injury
 1047
 Tip blight
 1577
 Water excess
 1724, 2325
 Water relations
 3687
 Wind injury
 207, 768, 770, 2955, 2988
 Winter and frost injury
 91, 132, 134, 424, 624, 661, 724, 765,
 919, 1395, 1532, 1798, 2033, 2186,
 2325, 2482, 2508, 2779, 2844, 3074,
 3117, 3172, 3174, 3176, 3178, 3180,
 3257, 3261, 3262, 3411, 3686
TULIP (*Tulipa* sp.)
 Frost necrosis
 1703
 Smoulder (*Sclerotium perniciosum*)
 3378
TURNIP (*Brassica rapa*)
 Club root (*Plasmodiophora brassicae*)
 117, 1260, 1271, 1408
 Dry rot (*Phoma lingam*)
 693
 Mildew (*Peronospora parasitica*)
 1070
 Storage rot (*Rhizoctonia solani*)
 1357

UNICORN PLANT (*Martynia* sp.)Leaf spot (*Bacterium martyniae*)

865

UREDINEAE

1569

VEGETATION (Crop plants and others)

Air impurities (aerial and soil)

Dusts

578, 911, 1099, 1100, 1342, 1343,
1344, 1361, 1585, 2273, 2460, 2502,
2543, 2793, 2983, 3587

Illuminating and other gases

272, 360, 425, 426, 744, 771, 909,
1019, 1143, 1334, 1343, 1344, 1788,
2406, 2567, 2568, 2695, 2824, 2902,
3082, 3083, 3088, 3175, 3499, 3500

Smoke and fog

44, 109, 146, 156, 425, 426, 483, 679,
684, 685, 686, 687, 837, 894, 895,
909, 910, 1019, 1030, 1246, 1247,
1274, 1344, 1358, 1359, 1360, 1383,
1384, 1423, 1424, 1486, 1585, 1751,
1782, 1793, 1796, 2019, 2097, 2267,
2273, 2340, 2355, 2386, 2387, 2388,
2405, 2413, 2502, 2565, 2568, 2632,
2698, 2702, 2785, 2789, 2790, 2791,
2793, 2794, 2901, 2903, 2933, 3073,
3084, 3163, 3334, 3475, 3524, 3530,
3576, 3580, 3581, 3582, 3583, 3584,
3585, 3586, 3598, 3622, 3623, 3624

Tar vapor

290, 540, 564, 908, 909, 1098, 1100,
2032, 2203, 3066, 3588

Bacterial diseases

2555, 3028, 3029

Carbon dioxide relations

943, 1045, 1545, 1964, 2371, 3164

Chlorosis

37, 101, 149, 418, 737, 795, 1087,
1130, 1138, 1151, 1211, 1809, 1834,
1898, 2008, 2045, 2080, 2081, 2082,
2083, 2219, 2716, 2777, 2796, 2982,
3457, 3596, 3600, 3604Crown gall (*Bacterium tumefaciens*)

3030

Diseases, general

413, 446, 448, 449, 490, 516, 608,
804, 813, 833, 1021, 1071, 1172,
1174, 1203, 1372, 1525, 1774, 2042,
2043, 2226, 2265, 2266, 2295, 2412,
2428, 2633, 2828, 2960, 3046, 3076,
3077, 3078, 3127, 3166, 3180, 3189,
3219, 3265, 3269, 3381, 3462, 3539,
3599

Drouth injury

269, 543, 723, 1266, 1425, 1530,
1671, 2037, 2534, 2830, 3038, 3356,
3674

Electrical injuries

3075

Environment and disease

388, 566, 796, 809, 859, 1175, 1259,
1265, 1267, 1273, 1285, 1413, 1418,
1451, 1530, 1698, 1935, 2266, 2395,
2398, 2486, 2855, 2858, 2957, 2978,
3167, 3215, 3218, 3265, 3340, 3414,
3428, 3525, 3535, 3537, 3682

Fasciation

3409a

Foliage injury

2455, 3221, 3222

Fumigation injury

2222

Hail injury

2062, 3101, 3501

Heat injury

1337, 2910, 3356, 3357

Immunity aspects

248, 387, 445, 607, 759, 1215, 1413,
1524, 1676, 2041, 2395, 2589, 2678,
2700, 2712, 2719, 2787, 3067, 3071,
3072, 3299, 3381, 3460, 3601

Leaf fall

1833

Nutritional elements, disease, and injury

528, 610, 664, 666, 942, 1289, 1295,
1419, 1930, 2125, 2341, 2500, 2676,
2783, 2787, 2854, 3048, 3170, 3399,
3414, 3595, 3596, 3597, 3642

Oxygen relations (roots chiefly)

224, 473, 474, 475, 476, 477, 478,
576, 577, 807, 1060, 1172, 1220,
1223, 1480, 1484, 1512, 1513, 1514,
1515, 1517, 1518, 1519, 1554, 1555,
1783, 1871, 1934, 2127, 2309, 2451,
2751, 2753, 3414, 3642, 3683

Phosphorus deficiency

1212

Potash deficiency

2341

Prophylaxis

607, 608

Shading

1170, 1259, 1530

Soil reaction

Disease and injury

8, 99, 100, 101, 102, 222, 576, 611,
841, 1020, 1044, 1158, 1288, 1772,
1843, 1919, 2121, 2301, 2364, 2389,
2560, 2904, 3238, 3344, 3348, 3584,
3585

Distribution

115, 116, 118, 237, 542, 603, 604,
841, 1222, 1240, 1443, 1787, 1832,
2031, 2191, 2254, 2389, 2402, 2786,
2806, 2807, 2808, 2818, 3383, 3550,
3551, 3552, 3553, 3554, 3684

Spray injuries

41, 143, 873, 905, 906, 1525, 1780,
1781, 2857, 2974, 3276, 3340, 3644

- Sunscald
1336, 1337, 1339, 2282, 2866, 3221,
3222, 3414
Temperature limits of life
2932
Toxic substances (injury from)
General
364, 664, 1060, 1107, 1790, 2817,
3546
Acetic acid
945
Alkali
428, 797, 1223, 1445, 1726, 1954,
1973, 2480
Aluminum
253, 254, 432, 502, 604, 616, 665,
1284, 1331, 1332, 1720, 1744, 1810,
1811, 1919, 2000, 2119, 2138, 2139,
2204, 2260, 2506, 2773, 2784, 3059,
3161, 3162
Ammonia
287, 294, 295
Arsenic
336, 337, 533, 1029a, 1574, 1750,
2255, 2356, 2444, 2507, 3226, 3625,
3644
Boron
336, 337, 339, 612, 620, 1345, 2251,
2462, 2530, 2890
Calcium
111, 268, 678, 1158, 1504, 1943
Chlorine
104, 1209, 1416
Copper
196, 335, 337, 548, 599a, 662, 665,
1014, 1205, 1340, 1352, 2036, 2193,
2507, 2987, 3119
Fluorine
2632
Iron
502, 1223, 1503, 1744, 2035, 2099,
2260, 2784
Lead
2356
Lithium
3401
Magnesium
111, 666, 1108, 1223, 1280, 1943,
3401
Manganese
112, 337, 502, 665, 729, 1223, 1224,
1744, 1777, 1944, 2100, 2124, 2260,
2504, 2506, 2784, 2995, 2996, 3161
Nickel
1341
Oil
501, 1781
Potassium
663, 1280
Salt (NaCl)
1928
Sodium
294, 295, 663, 1792, 3193
Sulphur
1411, 3657
Zinc
191, 665, 857, 1029, 1346, 1791,
1792, 1812, 2356, 3193, 3401
Water injury
1479, 1908, 2416
Wind injury
110, 228, 293, 405, 543, 976, 977,
1037, 1275, 1286, 1447, 2955, 3560,
3570
Winter and frost injury
1, 185, 247, 266, 269, 275, 302, 458,
524, 1059, 1171, 1173, 1268, 1293,
1313, 1335, 1479, 1798, 1931, 2077,
2104, 2217, 2221, 2277, 2278, 2329,
2343, 2416, 2434, 2437, 2666, 2670,
2754, 2847, 2929, 2975, 3058, 3069,
3075, 3113, 3157, 3178, 3179, 3414,
3444, 3536, 3577, 3614, 3675
VELVET BEAN (*Stizolobium deeringianum*)
Leaf spot (*Aplanobacter stizolobii*)
3630
VENTURIA INEQUALIS
182, 789, 3608, 3609
VERTICILLIUM SPP.
534, 3636
WALNUT (*Juglans* spp.)
Anthracnose (*Marssonnia juglandis*)
1065
Blackening disease
1063
Blight (*Pseudomonas juglandis*)
2142, 3012, 3044
Boron injury
1233, 1740
Chlorosis
1064, 1233
Fruit abscission
1938
Root rot
1066
Saline water injury
1230
Winter injury
186, 187, 188, 266
Yellows or little-leaf
1235
WATERMELON (*Citrullus vulgaris*)
Wilt (*Fusarium niveum*)
2545, 2546, 2547, 2548
WHEAT (*Triticum aestivum*)
Basal glume rot (*Bacterium atrofaciens*)
2108
Chlorosis
2094
Diseases, general
1048, 1229, 3189, 3404
Downy mildew (*Sclerospora macrospora*)
2359, 3543
Drouth injury
722, 2515, 3396

- Ergot (*Claviceps purpurea*)
2229
- Foot rot (*Helminthosporium sativum*)
1054, 1421, 2129, 2130, 2131, 2158,
2829
(*Leptosphaeria* sp.)
1422
- Frost and winter injury
699, 733, 1216, 1590, 2453, 3121,
3342
- Fusarium injury (*Fusarium* spp.)
2390, 2829
- Glume spots (*Septoria* spp.)
471, 683, 1218
- Hail injury
998, 1048
- Hydrogen-ion relations
1962, 3244
- Leaf injury (physiological)
1351
- Lodging
1976
- Mosaic
3479, 3480, 3481
- Petroleum injury
2302
- Plumed spore disease (*Diplophospora
alopecuri*)
2856
- Powdery mildew (*Erysiphe graminis*)
1017, 1216, 2643, 2645, 2647, 2845,
2907, 2907a, 3099, 3343, 3381
- Pseudo-bunt (*Acremonia thermophila*)
696
- Rusts
General
443, 451, 482, 606, 879, 1017, 1088,
1584, 1932, 1976, 2319, 2339, 2441,
2457, 2888
Leaf rust (*Puccinia triticea*)
202, 805, 1074, 1092, 1351, 1631,
2029, 2041, 2774a, 3518
Stem rust (*Puccinia graminis*)
46, 201, 202, 278, 281, 283, 389, 658,
805, 1094, 1195, 1216, 1271, 1366,
1515, 1516, 1548, 1549, 1550, 1551,
1573, 1600, 1601, 1841, 1854, 1907,
1932, 2169, 2435, 2673, 3104, 3105,
3106, 3107, 3108, 3267, 3395, 3518,
3676
Yellow rust (*Puccinia glumarum*)
90, 202, 203, 239, 240, 319, 389, 423,
605, 805, 1094, 1096, 1415, 1541,
2274, 2342, 2549, 2674, 3099
- Scab and seedling blight (*Gibberella
saubinetii*)
82, 389, 753, 754, 755, 756, 757, 758,
760, 761, 763, 764, 1218, 1490, 1491,
1492, 1599, 1680, 1686, 1687, 1981,
1982, 2495, 2879
- Smuts
General
282, 1264, 3190, 3200, 3423
- Flag smut (*Urocystis tritici*)
1015, 1198, 1199, 2357, 2358, 3385
- Loose smut (*Ustilago tritici*)
85, 826, 1024, 1033, 1216, 1430,
1552, 2291, 2701, 2925, 3292
- Bunt (*Tilletia* spp.)
64, 67, 79, 270, 280, 513, 590, 826,
935, 1033, 1111, 1216, 1250, 1373,
1375, 1377, 1379, 1436, 1455, 1543,
1544, 1629, 1736, 1756, 1767, 1769,
1966, 2158, 2194, 2269, 2292, 2566,
2605, 2649, 2849, 2925, 3201, 3275,
3319, 3352, 3408, 3523, 3645, 3646,
3688
- Sooty ear (*Cladosporium herbarum*)
1218
- Take-all (*Ophiobolus* spp.)
29, 274, 714, 1102, 1229, 1499, 2131,
2133, 2134, 2158, 2160, 2446, 2675,
2766, 2829, 2877
- Toxic materials
Aluminum
162, 3655
Boron
26, 621, 3402
Calcium
180
Copper
1587
Formaldehyde
126, 1546
General
1225
Hydrogen-ion
19, 315
Illuminating gas
875
Iron
3332
Manganese
180, 3332, 3400
Nickel
1587
Zinc
1587
Weather injury
131
White head
2515
White wilt
495
Yellow berry
1195, 1365, 1366, 1367, 1525, 1655,
1974, 2725, 2726
- WHEAT-GRASS (*Agropyron smithii*)
Bacterial disease (*Aplanobacter agropyri*)
2381
- WILLOW (*Salix* spp.)
Scab (*Fusicladium saliciperdu*)
1789
- ZINNIA (*Zinnia elegans*)
Wilt (*Sclerotium rolfsii*)
2590a

HOST INDEX (SCIENTIFIC NAMES)

<i>Abies</i> spp. (Firs)	182
<i>Acer</i> spp. (Maples)	185
<i>Agaricus campestris</i> (Mushroom)	185
<i>Agave rigida</i> (Sisal)	192
<i>Agropyron smithii</i> (Wheat grass)	199
<i>Allium cepa</i> (Onion)	186
<i>Allium fistulosum</i> (Welsh onion)	187
<i>Allium sativum</i> (Garlic)	183
<i>Althaea rosea</i> (Hollyhock)	184
<i>Alyssum odoratum</i> (Sweet alyssum)	194
<i>Amaryllis</i> sp. (Amaryllis lily)	173
<i>Amelanchier</i> sp. (Service berry)	192
<i>Amorphophallus campanulatus</i> (Stanley's wash-tub)	173
<i>Amygdalus persica</i> (Peach)	187
<i>Ananas sativus</i> (Pineapple)	189
<i>Antirrhinum majus</i> (Snapdragon)	192
<i>Apium graveolens</i> (Celery)	177
<i>Arachis hypogaea</i> (Peanut)	188
<i>Asparagus officinalis</i> (Asparagus)	174
<i>Avena sativa</i> (Oat)	186
<i>Begonia</i> sp. (Begonia)	176
<i>Beta vulgaris</i> (Table and sugar beets)	175
<i>Bowlesia septentrionales</i>	176
<i>Brassica oleracea</i> (Cabbage)	176
<i>Brassica oleraceae acephala</i> (Kale)	184
<i>Brassica oleraceae botrytis</i> (Cauliflower)	177
<i>Brassica rapa</i> (Turnip)	196
<i>Bromus</i> spp. (Bromes)	176
<i>Caladium</i> sp. (Caladium)	176
<i>Callistephus chinensis</i> (Aster)	174
<i>Canna</i> sp. (Canna)	176
<i>Capsicum annuum</i> (Pepper)	188
<i>Carum carvi</i> (Caraway)	176
<i>Castanea dentata</i> (Chestnut)	178
<i>Celosia cristata</i> (Cockscomb)	177
<i>Chaetochloa lutescens</i> (Foxtail)	182
<i>Chlorella</i> sp. (Blue-green alga)	178
<i>Chrysanthemum</i> sp. (Chrysanthemum)	178
<i>Citrullus vulgaris</i> (Watermelon)	198
<i>Citrus</i> spp. (Citrus)	178
<i>Citrus limonia</i> (Lemon)	184
<i>Citrus sinensis</i> (Orange)	187
<i>Cocos nucifera</i> (Coconut)	179
<i>Coffea arabica</i> (Coffee)	179

Coniferae (Conifers)	179
Corchorus sp. (Jute)	184
Crocus sativus (Saffron)	192
Cruciferae (Crucifers)	181
Cryptomeria japonica	181
Cucumis sativus (Cucumber)	181
Cucurbita maxima (Squash)	193
Cucurbitaceae (Cucurbits)	181
Cyclamen sp. (Cyclamen)	181
Cydonia oblonga (Quince)	191
Cynara scolymus (Globe artichoke)	174
Daucus carota (Carrot)	177
Delphinium sp. (Delphinium)	184
Dianthus caryophyllus (Carnation)	176
Elodea canadensis (Elodea)	182
Eucalyptus sp. (Eucalyptus)	182
Euonymus japonicus (Euonymus)	182
Euphorbia spp. (Euphorbias)	182
Fagopyron esculentum (Buckwheat)	176
Fagus americana (Beech)	175
Fragaria sp. (Strawberry)	193
Gladiolus sp. (Gladiolus)	183
Glyceria nervata (Fowl meadow grass)	183
Gossypium hirsutum (Cotton)	180
Helianthus annuus (Sunflower)	194
Hevea brasiliensis (Rubber tree)	191
Hibiscus ventifolius (Mallow)	185
Hicoria pecan (Pecan)	188
Holcus spp. (Sorghums)	192
Hordeum vulgare (Barley)	175
Humulus lupulus (Hop)	184
Hyacinthus orientalis (Hyacinth)	184
Indigofera sp. (Indigo)	184
Ipomoea batatas (Sweet potato)	194
Iris spp. (Iris)	184
Juglans spp. (Walnuts)	198
Kalmia latifolia (Mountain laurel)	185
Lactuca sativa (Lettuce)	185
Larix sp. (Larch)	184
Lathyrus odorata (Sweet pea)	194
Leguminosae (Legumes)	184
Lepidium sativum (Cress)	181
Lilium spp. (Lilies)	185
Linum usitatissimum (Flax)	182
Lobelia sp. (Lobelia)	185
Lupinus spp. (Lupines)	185
Lycopersicum esculentum (Tomato)	195
Mahonia aquifolium (Hollygrape)	184
Malus sylvestris (Apple)	173
Mangifera indica (Mango)	185

<i>Manihot esculenta</i> (Cassava)	177
<i>Martynia</i> sp. (Unicorn plant)	197
<i>Medicago sativa</i> (Alfalfa)	173
<i>Melilotus</i> sp. (Sweet clover)	194
<i>Mentha</i> spp. (Mints)	185
<i>Morus</i> sp. (Mulberry)	185
<i>Musa</i> spp. (Bananas)	174
<i>Nerium oleander</i> (Oleander)	186
<i>Nicotiana tabacum</i> (Tobacco)	195
<i>Nymphaea</i> spp. (Pond lilies)	186
<i>Oenothera</i> sp. (Evening primrose)	182
<i>Olea europea</i> (Olive)	186
<i>Oryzae sativa</i> (Rice)	191
<i>Pachysandra terminalis</i> (Pachysandra)	187
<i>Paeonia</i> sp. (Peony)	188
<i>Panax quinquefolium</i> (Ginseng)	183
<i>Panicum miliaceum</i> (Proso millet)	185
<i>Papaver</i> spp. (Poppies)	189
<i>Paspalum scrobiculatum</i> (Millet)	185
<i>Passiflora edulis</i> (Passion vine)	187
<i>Pelargonium</i> sp. (Geranium)	183
<i>Persea americana</i> (Avocado)	174
<i>Petroselinum hortense</i> (Parsley)	187
<i>Petunia hybrida</i> (Petunia)	188
<i>Phaseolus</i> spp. (Beans)	175
<i>Phleum pratense</i> (Timothy)	194
Phoenicaceae (Palms)	187
<i>Phorodendron juniperinum</i> (Mistletoe)	185
<i>Picea</i> spp. (Spruces)	193
<i>Pinus</i> spp. (Pines)	188
<i>Piper betle</i> (Betel vine)	176
<i>Pisum</i> spp. (Peas)	187
<i>Platanus</i> sp. (Sycamore)	194
<i>Populus</i> sp. (Cottonwood)	180
<i>Primula obconica</i> (Primrose)	191
<i>Protea cynaroides</i>	191
<i>Prunus armeniaca</i> (Apricot)	174
<i>Prunus</i> spp. (Cherries)	178
<i>Prunus</i> spp. (Plums)	189
<i>Pseudotsuga douglassii</i> (Douglas fir)	181
<i>Punica granatum</i> (Pomegranate)	189
<i>Pueraria hirsuta</i> (Kudzu vine)	184
<i>Pyrus communis</i> (Pear)	188
<i>Quercus</i> spp. (Oaks)	186
<i>Radicula armoracia</i> (Horseradish)	184
<i>Raphanus sativus</i> (Radish)	191
<i>Rheum rhaponticum</i> (Rhubarb)	191
<i>Rhododendron</i> sp. (Rhododendron)	191
<i>Ribes</i> spp. (Currants)	181
<i>Ribes</i> spp. (Gooseberries)	183

<i>Ricinus communis</i> (Castor bean)	177
<i>Rosa</i> spp. (Roses)	191
<i>Rubus</i> sp. (Dewberry)	181
<i>Rubus</i> spp. (Raspberry, etc.)	191
<i>Saccharum officinarum</i> (Sugar cane)	193
<i>Salix</i> spp. (Willows)	199
<i>Sandoricum koetjape</i> (Santol)	192
<i>Secale cereale</i> (Rye)	192
<i>Senecio cruentus</i> (Cineraria)	178
<i>Sesamum indicum</i> (Sesame)	192
<i>Setaria</i> sp. (Millet)	185
<i>Shorea robusta</i> (Sal)	192
<i>Soja max</i> (Soybean)	193
<i>Solanaceae</i> (Solanums)	192
<i>Solanum melongena</i> (Eggplant)	182
<i>Solanum tuberosum</i> (Potato)	189
<i>Spinacia oleracea</i> (Spinach)	193
<i>Stizolobium deeringianum</i> (Velvet bean)	198
<i>Syringa vulgaris</i> (Lilac)	185
<i>Thea sinensis</i> (Tea)	194
<i>Theobroma cacao</i> (Cacao)	176
<i>Trifolium alexandrinum</i> (Berseem)	176
<i>Trifolium</i> spp. (Clovers)	179
<i>Triticum aestivum</i> (Wheat)	198
<i>Tropaeolum majus</i> (Nasturtium)	185
<i>Tulipa</i> sp. (Tulip)	196
<i>Ulmus</i> spp. (Elms)	182
<i>Vaccinium macrocarpon</i> (Cranberry)	180
<i>Vaccinium</i> sp. (Blueberry)	176
<i>Vicia faba</i> (Broad bean)	176
<i>Vigna sinensis</i> (Cowpea)	180
<i>Vitis</i> spp. (Grapes)	183
<i>Zea mays</i> (Corn, Maize)	179
<i>Zinnia elegans</i> (Zinnia)	199